YOUTH DEVELOPMENT IN COMMUNITY RECREATION PROGRAMS:

LEVERAGING CONTEXT TO PROMOTE SELF-REGULATION

by

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ABSTRACT

This dissertation is comprised of five chapters, three of which are written in an article format and will later be submitted for publication. The remaining two chapters, Chapters 1 and 5, serve as introductory and summary chapters. This dissertation seeks to address conceptually, empirically, and from an evaluative standpoint how recreation settings can serve to promote self-regulation in youth. Recreation programs are ideally situated to support the development of self-regulation in youth. However, the role of self-regulation in recreation programs is one that has seen little review, making it an important topic to examine.

Chapter 2 is a synthesis of the literature on self-regulation, youth development, and recreation. This chapter provides practitioners with leverage points on how to support self-regulation in youth. The findings from this synthesis suggest that practitioners can utilize some of the key elements of a recreation program to foster self-regulation. Specifically, practitioners should leverage fun and enjoyment, recreation activities that have developmental attributes, and interpersonal relationships. A discussion with recommendations for practice is presented.

The third chapter examines the effects of a mentoring program on youth participants' self-regulation. An 8-week-long mentoring curriculum was implemented in a summer recreation program. The research was conducted with two matched sites from the same recreation agency, one to serve as the treatment site, the other to serve as a

comparison site. Self-regulation scores were collected on a sample of youth who received mentoring (n = 29) and youth who did not receive mentoring (n = 35). A repeated measures multivariate analysis of variance was conducted. Results indicated that youth who received the mentoring showed a greater rate of change over time in self-regulation than the comparison site. These findings suggest that a structured mentoring program is an important mechanism with which to promote youths' self-regulation. Implications for research and practice are discussed.

Chapter 4 presents a broader approach to program evaluation by providing an example of program implementation evaluation. This paper draws on the implementation of a youth mentoring program to illustrate the methods used to assess key implementation factors. A mixed methods approach was used to collect implementation data and included the use of a structured journal and interviews with program implementers and participants. The process of assessing program implementation is discussed, highlighting the challenges in conducting program implementation evaluation within a recreation setting.

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CHAPTER 1

INTRODUCTION

Young people face a number of challenges that position them in a paradoxical tension between increased resiliency and vulnerability. The extent to which youth are able to successfully navigate these challenges is largely dependent on effectively regulating their behaviors, cognitions, motivations, and emotions. Recent research has identified self-regulatory processes as essential to the positive development of youth as they promote and serve to direct adaptive functioning (Gestsdottir & Lerner, 2008). Yet, youth are in an important stage of maturation where these self-regulatory functions are dependent upon cognitive processes that are still developing, making them vulnerable to adopting unhealthy behaviors (Steinberg, 2005). The importance of having effective self-regulatory skills has led to numerous interventions implemented in school and clinical settings (e.g., Blair & Diamond, 2008; Wyman, Cross, Brown, Yu, Tu, et al., 2010). Findings from these studies are promising and show that self-regulatory skills can be developed, promoted, and strengthened in youth.

Although substantial research indicates that these interventions are effective, little research has looked at how such programs might translate into other youth settings. Recreation programs, for example, are one such setting that demonstrates important

developmental nutriments beneficial in the lives of youth (e.g., Caldwell, 2005). Recreation programs are a powerful setting where youth can learn and practice important regulatory skills through engaged activity participation. The social fabric within these contexts parallels important adult-youth and peer relations that develop and support adaptive self-regulation necessary for healthy development (e.g., Diaz, Neal, & Amaya-Williams, 1990). Therefore, the purpose of this dissertation is to explicate, conceptually and empirically, the role of self-regulation within a recreation context in an effort to extend its importance in providing youth the resources necessary for healthy development.

This dissertation is presented in five chapters with Chapters 2-4 written in article format. The purpose behind such a process follows the conceptualization, analysis, and dissemination of three distinct, yet related, manuscripts on the role of recreation programs to promote self-regulation in youth. These chapters seek to provide valuable insight into the relationship and inherent tension between theory and practice. Chapter 2 provides a theoretical framework for promoting self-regulation in youth in recreation settings. Chapter 3 seeks to apply theory in an empirical investigation. Chapter 4 introduces the concept of implementation evaluation to recreation programming and provides an applied example and recommendations.

Chapter 2, *Self-regulation and youth development: The role of recreation programs,* presents a synthesis of theory and empirical evidence to demonstrate the important role that the development of self-regulation skills plays in navigating through adolescence. More specifically, the chapter reasons that recreation programs provide a context rich in regulatory capital to support youth's developmental needs. Self-regulation

is defined as the volitional processes directing emotional, behavioral, motivational, and cognitive efforts conducive to positive adjustment and adaptation to achieve a desired end state (Gestsdottir & Lerner, 2007). Within a developmental systems framework, self-regulation is one of the central facets determining healthy development in youth (e.g., Lerner, Brentano, Dowling, & Anderson, 2002). Youth who are better able to self-regulate are better prepared to successfully transition into adulthood and are more likely to develop into productive members of society (Lerner et al., 2002). Conversely, youth who fail to self-regulate report greater emotional and behavioral problems (e.g., Somerville, Jones, & Casey, 2010). Interventions targeting the development of self-regulation point to a few mechanisms relevant to recreation programs. These mechanisms often target teaching youth how to set goals, identify strategies to reach goals, apply strategies, and evaluate the effectiveness of one's efforts. Furthermore, the literature suggests that the development of self-regulation emerges through relationships with adults who scaffold learning opportunities where they can observe, emulate, practice, and self-direct their skill development (e.g., Cleary & Zimmerman, 2004; Diaz et al., 1990; Wyman et al., 2010).

Chapter 2 posits that the underlying developmental qualities within recreation activities that specifically support self-regulatory skills are those that are goal oriented, challenging, and build skills. These types of activities provide the opportunity to engage in the cognitive processing, motivation, and self-directed behaviors that reflect effective self-regulation (e.g., Larson, 2000; Watts & Caldwell, 2008). Moreover, the social context within recreation programs provides meaningful opportunities to build healthy adult-youth and peer relationships (Bocarro & Witt, 2003). The social fabric integral to

these programs is well situated for adults to scaffold opportunities that teach youth how to plan, guide, and monitor their efforts towards achieving self-set goals. Collectively, these mechanisms are well documented to support self-regulation in youth, yet their application to a recreation setting has received little attention. However, if recreation programs are given the tools and resources to intentionally promote self-regulation, they may prove to be a critical setting to support positive youth development and thereby reduce risk behaviors.

Drawing on the conceptual framework and strategies suggested to promote self-regulation in Chapter 2, Chapter 3, *Fostering self-regulation skills in youth: Examining the effects of a mentoring curriculum in a summer recreation program,* focuses on the implementation of a mentoring intervention in a local recreation program. This chapter presents an empirical investigation of the effects of a mentoring curriculum in a recreation program for youth ages 9-14. Recreation staff were trained as mentors to scaffold activities to promote self-regulatory strategy use. The "scaffold" or supportive structure that staff used included the following strategies and progression: 1) The mentor models and verbally teaches the self-regulatory skill; 2) The youth imitates and practices the skills and verbalizes the various components of the skill; 3) The mentor guides the youth through role plays to incorporate the skills into different domains and contexts; 4) The mentor has the youth practice skills and offers coaching when necessary; 5) The mentor provides the youth with *in vivo* coaching; 6) The youth begins to use skills in naturalistic contexts; 7) The mentor offers reinforcement when needed; and 8) The youth initiates skill use without mentor prompting. The mentor worked with each program participant and tailored the curriculum to meet the youth's needs and progress to ensure

self-regulatory skill development. This approach followed an empirically supported scaffolding model (Wyman et al., 2010) that guided program participants to learn how to set goals, identify appropriate strategies, and evaluate the effectiveness of those strategies in reaching their goals (e.g., Perels, Merget-Kullman, Wende, Schmitz, & Buchbinder, 2009; Zimmerman, 2000).

Staff met one-on-one with program participants for weekly mentoring sessions lasting 15-20 minutes for the duration of the 8-week summer program. Program staff evaluated participants' self-regulatory behaviors using the Metacognition Index (MI) from the Behavior Rating Index of Executive Functions Teacher Report form (Guy, Isquith, & Gioia, 2001). Staff completed the MI during the first week of the program to provide a baseline measure, during week 5, and then at the end of the 8-week session. The MI captures a teacher's perception of the self-regulation skills adolescents' use in their everyday environment. It was hypothesized that program participants at the treatment site would show greater improvements in self-regulation than the comparison group on the MI. This chapter provides the center point in the dissertation as an empirical investigation into a self-regulation mentoring intervention applied to a recreation setting.

Recognizing that no matter how well an intervention is conceptualized, its effectiveness is largely dependent upon how well it is implemented (Dusenbury, Brannigan, Hansen, Walsh, & Falco, 2005). Chapter 4, *Evaluating program implementation in youth recreation programs: Moving beyond outcomes,* is a focused effort to explicate program implementation factors that effect program outcomes in a youth mentoring program targeting self-regulation skills. The importance of understanding what drives program effectiveness is at the core of establishing evidence-

based practices. While evidence-based practices are often the standard from which a program is measured and evaluated, adherence to these standards is often limiting in providing a clear picture of how other implementation factors interact together to influence program efficacy. This is especially true when programs are in an early phase of development (Shen, Yang, Cao, & Warfield, 2008). Thus, investigating other implementation factors tied to program fidelity can be an important first step to refining and improving program design and effectiveness. This is particularly relevant in the case of the mentoring program, as the program was in an early stage of development and was applied to a novel context with little to reference and compare against.

Drawing on Berkel, Mauricio, Schoenfelder, and Sandler's (2011) model of program implementation, fidelity, quality, adaptation, and participant responsiveness were identified as four implementation factors tied to program effectiveness. Program fidelity is the degree to which a program is implemented as specified in a program manual (Berkel et al., 2011). In the context of the mentoring program, which was dependent upon highly individualized interactions between mentors and mentees, assessing for strict fidelity may not suffice as a sole indicator of program efficacy. Quality is broadly defined as how well a program is delivered (Dusenbury et al., 2005). Adaptations, on the other hand, refer to the modifications or aspects of curriculum omitted that a facilitator changes during program implementation (Durlak, & DuPre, 2008). While traditionally considered a deviation from fidelity, examining adaptations is quickly becoming recognized as a factor enhancing program effectiveness (Dusenbery et al., 2005). Adaptations can be made for a number of reasons, such as group dynamics, time constraints, and perceived effectiveness (Berkel et al., 2011). Finally, participant

responsiveness is considered the degree to which a participant is actively engaged in the program. Participant responsiveness mediates program fidelity and adaptations to directly influence outcome achievement. Thus, it was proposed that program fidelity, quality, adaptation, and participant responsiveness, when examined together, would provide insight into the factors affecting program efficacy. Therefore, the purpose of this chapter was to introduce a broader approach to evaluation and provide an example of implementation evaluation and discuss how it might be used in recreation youth programming. I drew on the implementation of a youth mentoring program to illustrate the methods and measurement used to assess program fidelity, quality, adaptations, and participant responsiveness.

The intervention mentors, discussed in Chapter 3, were asked to complete a structured journal assessing the content covered, which scaffolding strategies were utilized, adaptations made to the curriculum, and how responsive participants were during each mentoring session. These journals provided a measure of fidelity defined by the percentage of content covered, which were outlined in the mentor manual (Morgan, 2011). Quality was assessed by tracking the scaffolding strategies mentors used during the mentoring sessions. Mentors were asked to record any adaptations or changes made to the curriculum and to describe why they felt those changes were necessary. In exit interviews, staff were asked to elaborate on these adaptations and to discuss their perceptions of program efficacy and offer suggestions for improvement. Finally, mentors tracked participant attendance and level of engagement during mentor sessions as measures of participant responsiveness. In addition, mentors conducted an exit interview with participants to ascertain their perceptions of program effectiveness. These data were

analyzed qualitatively using a grounded theory framework to explore program fidelity, adaptations, and participant responsiveness. Interviews were recorded, transcribed, and analyzed using a constant comparative approach. Responses were methodically examined for comparison between responses, formulation of emergent themes, and coding. Coding of responses was enumerated to compute percentages and compare for relative magnitude.

Chapter 4 provides a capstone to the dissertation by offering insights into factors influencing the program outcomes identified in Chapter 3. Chapter 4 highlights the challenges, strengths, and weaknesses of translating a conceptual framework into practice. To this end, it offers an example of methods used to assess implementation evaluation in recreation programs.

Recreation programs are a developmentally important setting for youth to learn and practice important life skills in a socially supportive environment. Although little debate exists as to the benefits of recreation programs, scant attention has been directed towards intentionally designing programs to support the development of self-regulation. Yet, interventions implemented in other youth settings (i.e., school) show gains in self-regulation, indicating that interventions adapted to meet the programmatic and social context of recreation programs may be amenable to supporting the development of self-regulation in youth. Collectively, these chapters seek to explicate the development, implementation, and evaluation of an empirical investigation into the effects of a self-regulation mentoring program on youth development.

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CHAPTER 2

SELF-REGULATION AND YOUTH DEVELOPMENT: THE ROLE OF RECREATION PROGRAMS

Introduction

Critical to young people's healthy development is the ability to successfully navigate and adapt to the many challenges and growth opportunities present during one's youth. Although these formative years are often characterized by a propensity to engage in risk behaviors such as substance abuse, delinquency, and academic failure, there also exists important growth opportunities for increased autonomy, identity formation, decision-making skills, mastery, leadership, and relationship-building skills. In the same way that a healthy immune system is one of the most effective ways to protect against illness, youth who have healthy relationships, problem solving skills, motivation, self-efficacy, and self-regulatory skills are more likely to develop into healthy, well-adjusted, and actively contributing members of society (Masten, Herbers, Cutili, & Lafavor, 2008). To this end, recreation service providers believe that recreation programs are well positioned to help youth develop important life skills that can serve as an "antibody" to protect against unhealthy development.

Both the activities and the social context inherent to recreation programs are especially well suited to promote the development of self-regulatory skills in youth.

Substantive evidence indicates that activities and staff in youth programs play a critical role in youth achieving self- regulation because its development emerges through interpersonal relationships (e.g., Keating, 2004). Thus, it is argued that recreation programs are well situated to support the development of self-regulatory skills in youth.

Self-regulatory skills are said to be one of the most important functions driving healthy development (Posner & Rothbart, 2000). These skills are characterized by an ability to engage and calibrate emotions, behaviors, cognitions, and motivations to achieve a particular goal. Within the prevention and education arena, a young person's capacity to self-regulate is of particular interest, as it has been shown to affect a range of outcomes such as socioemotional competence (e.g., Bierman, Nix, Greenberg, Blair, & Domitrovich, 2008), resilience (e.g., Masten, 2004; Wyman, Cross, Brown, Yu, Tu, et al., 2010), academic achievement (e.g., Cleary, Platten, & Nelson, 2008), and performance (e.g., Cleary, Zimmerman, & Keating, 2006; Kitsantas, Reiser, & Doster, 2004). These outcomes are, however, significantly influenced by contextual factors, which play an instrumental role in supporting and promoting self-regulation in youth (e.g., Boekaerts & Corno 2005; Hobfoll, 2010; Masten 2004). Although many youth programs show evidence of positive developmental gains, the role of self-regulation in recreation programs is one that has received little attention, despite its inherent potential.

Recreation programs offer a dynamic learning environment, where youth can try new things, develop skills, and build new relationships, providing them meaningful experiences that support gains in important life skills (e.g., Eccles & Barber, 1999; Larson, 2000). Many of the outcomes associated with recreation participation (e.g., positive relationships, problem-solving skills) correspond to processes and outcomes tied

to youth development and self-regulatory processes (Masten, 2004). As such, recreation professionals are already able to leverage many of the key elements that drive the development of self-regulation. However, conceptual and empirical links between recreation participation and self-regulatory functioning have largely been neglected.

It is also important to emphasize that self-regulation is generative, meaning that it is the basis for achieving other healthy outcomes. In other words, effective self-regulation can act as a catalyst to achieve other positive outcomes (resilience, coping, academic achievement, etc.; Masten, 2004). Furthermore, many recreation programs target specific outcomes, yet achievement of these outcomes is contingent upon the ability to employ effective self-regulatory strategies (Boekaerts & Corno, 2005). Thus, targeting self-regulation through intentional program design or intervention may facilitate achievement of more proximal or program specific outcomes (e.g., leadership, self-esteem, well being, civic engagement, academic achievement, etc.). It is then imperative to understand the contextual factors integral to recreation programs that may serve to promote self-regulatory competence.

Therefore, the aim of this chapter is twofold: 1) To synthesize and link the literature on self-regulation, youth development, and recreation programs; and 2) To offer leverage points for recreation professionals to use to promote self-regulation in youth participants. To meet this objective, this chapter will first provide a background highlighting the significant role that self-regulation and cognitive development play in shaping youth development. Second, the use of fun and enjoyment, activities, and interpersonal relationships in fostering self-regulation are presented. Finally, a discussion with recommendations for practice is offered.

Conceptual Background on Self-Regulation and Youth Development

For recreation professionals, understanding how self-regulation impacts youth development is important in order to construct recreation opportunities that provide the developmental nutriments youth need to maintain healthy trajectories. To this end, a conceptual foundation on self-regulation and cognitive development is presented that will help to explain why recreation programs are well situated to support the development of self-regulation.

Self-regulation and youth development has become a widely studied area of research due to its implications in supporting healthy adaptation and adjustment into adulthood. However, the extensive interest in self-regulation has resulted in numerous conceptualizations of self-regulation, creating a labyrinth of theories describing processes of self-regulation. Disentangling these conceptualizations of self-regulation is beyond the scope of this chapter. Because this chapter is primarily interested in understanding the contextual factors affecting youth development, a developmental systems framework will be used. Consistent with this framework, self-regulation is understood as the volitional processes directing emotional, behavioral, motivational, and cognitive efforts conducive to positive adjustment and adaptation to achieve a desired end state (Gestsdottir & Lerner, 2007).

The basis for healthy development depends on a person-context interaction where an individual is able to adapt to environmental factors, as well as alter the environment to support personal needs and sustain goal pursuit (Lerner, Brentano, Dowling, & Anderson, 2002). This adaptive process suggests that young people are producers of their own development, as opposed to subjects shaped and molded by deterministic factors (e.g.,

biology). That is, the development of self-regulation occurs via an individual-contextual interaction that is both biologically (e.g., maturation) and contextually (e.g., relationships) driven. Thus, effective regulation of the individual and context is the basis for positive growth into adulthood. However, for young people who are undergoing significant developmental changes, self-regulation is particularly effortful due to still maturing cognitive processes that affect how they employ self-regulatory strategies (Steinberg, 2005).

Recent research has identified self-regulatory processes as essential to the positive development of youth, as they promote and serve to direct adaptive functioning and minimize negative behavior (Gestsdottir & Lerner, 2008). Youth who are better able to self-regulate are better prepared to navigate the challenges and pressures associated with family, peers, school, and work (Gardner, Dishion, & Connell, 2008). Research shows that youth who effectively self-regulate exhibit behaviors linked to positive youth development ("5 C's" - Competence, Caring, Confidence, Connection, and Character; Gestsdottir & Lerner, 2007). Youth also demonstrate greater self-esteem (Buckner, Mezzacappa, & Beardslee, 2003) and resilience to challenging circumstances (Masten, 2004). Further, self-regulation is one of the key factors attributed to academic achievement, learning motivation, and life-long learning (Dignath, Buettner, & Langfeldt, 2008). On the other hand, inability to effectively self-regulate contributes to youth engaging in a number of unhealthy behaviors such as substance abuse (Percy, 2008), delinquency (Gestsdottir & Lerner, 2007), antisocial behaviors (Gardner, Dishion, & Connell, 2008), and risk-taking (Magar, Phillips, & Hosie, 2008). Further, youth who employ less effective self-regulatory strategies often show poor academic performance in

comparison to their peers who utilize more adaptive strategies (Frydenberg, 2008). While effective self-regulation is essential to achieving healthy development, it is also dependent on cognitive processes that are still maturing.

Cognitive Development

Similar to other cognitive functions during this time, self-regulation is on a developmental trajectory that will continue to mature into young adulthood. The pre-frontal cortex, the region of the brain responsible for a number of cognitive processes, including self-regulation, is still maturing and yet increasingly exhibits and resembles adult-like functionality. The significant maturation in physiology, perception, attention, memory, language, emotion, self-perceptions, and cognition reflects a noted increased use of meta-cognitive skills and emotion recognition that promote improved planning and cognitive skills that are used to self-regulate (Skinner, & Zimmer-Gembeck, 2007).

This is important to highlight because in many recreation programs, these types of cognitive skills (e.g., goal setting, planning, problem solving, decision making) often come into use and are necessary to achieve important outcomes. For example, Larson and Hanson (2005) found in a youth program designed to promote civic activism that youth learned how to apply various forms of strategic thinking to complex, ill-structured problems. In turn, youth described these experiences as essential to developing more independently driven behaviors. Similarly, other out-of-school-time programs have been shown to promote complex cognitive processing by offering activities that are engaging, challenging, and elicit feedback (Larson & Agnus, In Press). Such findings lend support

that recreation programs, with the appropriate structure and program design, might serve to promote these important cognitive processes necessary for effective self-regulation.

Yet, despite maturation in cognitive functioning, and thus, self-regulatory competence, young people are still in a vulnerable place. The region of the brain activating emotional responses precede in maturation the self-regulatory processes (planning, inhibition, decision making) that assist in modulating intense affective responses typical of young people (Johnson, Blum & Giedd, 2009). This means an imbalance exists between two systems of the brain related to emotional and incentive-driven behaviors and those related to cognitive and impulse control (Somerville, Jones, & Casey, 2010). Such a discrepancy lends to a susceptibility and propensity toward behavior driven by affect, not always moderated by strong self-regulatory skills. For example, young people tend to demonstrate fairly strong decision-making abilities in low- arousal, low-emotional environments; however, when placing the same young person in a high-arousal, high-emotional environment, the ability to make sound decisions is much more difficult and effortful (Dahl, 2004). This suggests that the changes young people are undergoing involve a highly responsive state to environmental cues that are emotionally driven; yet they lack mature self-regulatory skills to effectively manage and inhibit their responses, which often results in making poor choices. Thus, learning how to adaptively respond to situations is an important component of effective self-regulation for which recreation programs are ideally positioned (for youth to learn and practice such skills).

Consider activities such as structured games or sports that adhere to rules yet often can become competitive among peers. Youth often have no problem discussing the

rules before a game, but once the game becomes more emotionally engaging, it is increasingly difficult to separate and rationally direct behavior. Subsequently, helping youth learn how to identify, plan, and guide their thoughts and feelings while engaged in such a highly salient youth setting (e.g., Larson, 2000) may facilitate the transfer of these self-regulation skills into other areas of their life.

Recreation Programs as a Context to Promote Self-Regulation

There is little debate that self-regulation is critical to healthy development and directly impacts the achievement of healthy outcomes. Although no direct link has established the relationship between self-regulation and recreation participation, related literature suggests that recreation programs may enhance self-regulatory functioning (Caldwell & Witt, 2011; Gestsdottir & Lerner, 2008; Larson, 2000). Indeed, self-regulation has often been compared to a muscle, meaning that it has the capacity to be strengthened and conditioned to effectively adapt and meet demanding situations (Muraven & Baumeister, 2000).

Given the significance of self-regulation, it is somewhat surprising that few recreation programs intentionally target self-regulation. Yet, recreation programs are well situated to leverage the things that they naturally do well. To this end, I summarize research on three primary elements tied to recreation programs that can be leveraged to promote self-regulation: (a) fun and enjoyment, (b) activities, and (c) a positive social environment. Each of these factors is known to support self-regulation and with the right tools, recreation professionals can intentionally integrate them into the design and delivery of programs.

Leveraging Fun and Enjoyment

Foundational to the recreation experience is that participation tends to be fun and enjoyable. Some have argued that in order to get any benefit out of a recreational experience, it needs to be fun (e.g., Csikszentimihalyi, 1990). However, having fun as a primary purpose of a recreation program is oftentimes lost in pursuit of outcomes perceived as more important (e.g., health, positive youth development, social skills). Yet, the developmental value in having fun cannot be overstated. When participants have fun, there is often a sense of wanting to participate in the activity for its own sake, as opposed to doing it because it is good for you, or for some other rational, external, or obligatory reason (Henderson, Glancy, & Little, 1999). As a result, fun and enjoyment can serve as a basis for sustained participation. In turn, that sense of enjoyment can foster intrinsic motivation, engagement, and positive emotions (Scalan & Simons, 1992), all of which contribute to effective self-regulation.

Intrinsic motivation and engagement. A central facet of the recreation experience is intrinsic motivation and engagement**.** Intrinsic motivation is important because it can lead to a sense of competence, autonomy, and relatedness (Ryan & Deci, 2000). When youth are encouraged to exert choice and autonomy, they show greater engagement in their learning (e.g., Deci & Ryan, 2000; Perry, VandeKamp, Mercer, & Nordby, 2002). Unlike other settings relevant to a young person's life, recreation programs provide tremendous opportunity to engage in voluntary activity that develops competence in various domains while requiring one to exert a degree of self-control over one's actions (e.g., Hansen, Larson, & Dworkin, 2003; Kleiber, 1999; Witt & Caldwell, 2005). Not surprisingly, youth consistently report more motivation and cognitive

engagement when participating in youth activities in comparison to other settings (e.g., school) (Csikszentmihalyi & Larson, 1984; Larson & Kleiber, 1993). This type of motivation helps young people sustain continued engagement, which is essential to achieving personal goals (Tsorbatzoudis, Alexandris, Zahariadis, & Grouios, 2006). Because these activities are intrinsically rewarding and elicit high levels of engagement, they may act as a catalyst for development (Larson, 2000; Walker, Marczak, Blyth, & Borden, 2005). Recreation programs can be an important context that fosters motivation and helps youth learn how to use that motivation to effectively self-regulate. Motivation drives self-regulation because it fuels what one regulates towards and provides the means to sustain one's efforts, even in the face of challenges (e.g., Blumenfeld, Kempler, & Krajcik, 2006; Zimmerman 2000).

For example, if a youth is not interested or motivated to participate in a soccer league, rarely will that youth regulate his or her efforts towards becoming better at playing soccer. Alternatively, youth who are motivated to play soccer will focus on learning more about the game, improving technique, practicing, and so forth. Recreation programs afford youth the opportunity to select activities that are meaningful and set self-endorsed goals that provide the basis for developing intrinsically motivated behaviors. When youth feel like they have choice and freedom to engage in activities, they are more likely to experience developmental outcomes (Caldwell & Witt, 2011). Thus, when youth are motivated to participate in activities, engagement builds self-regulatory capital because the activities encourage youth to think about goals, problem solve, and overcome obstacles (Larson, 2000; Larson & Hanson, 2005). Furthermore, one of the common

explanations for continued participation and motivation is the enjoyment and positive emotional response experienced (Scanlan & Simons, 1992).

Positive emotional response. Recreation programs often result in positive emotions (Caldwell & Witt, 2011; Dworkin, Larson, & Hansen, 2005). Experiencing positive emotions motivates further engagement in activities and supports social relationships, which, in turn, build greater self-regulatory capital and lead to upward spirals of well being (Garland et al., 2010). In other words, when an individual experiences positive affect, he or she is more likely to pursue further engagement in opportunities that achieve similar affective experiences. Positive emotional experiences improve self-regulation because positive emotions broaden cognition and attention, which, in turn, promote cognitive flexibility, creativity, goal setting, and planning (Tice, Baumeister, Shumell, & Muraven, 2007; Tinsley, & Eldredge, 1995). Such skills are the basis for adaptive self-regulation and are necessary to overcome difficult and challenging situations (Aspinwall, 1998; Garland et al., 2010). One component of the recreation experience that can contribute to affect is activities. As discussed below, activities that focus on goals and competence building can be a source of engagement and motivation for youth (Dawes & Larson, 2011) and are reasoned to support self-regulation.

Leveraging Activities

Activities are a defining feature of recreation programs, and when designed and delivered appropriately, result in developmental outcomes. According to the Carnegie Council on Adolescent Development (1992) report, activities that generate positive outcomes are typically those that are goal-oriented, require focused attention, offer

challenges, build skills that lead to mastery, and necessitate persistence. These types of activities are referred to as *high yield activities.* High-yield activities are more likely to contribute to personal growth, whereas low-yield activities often lead to boredom or apathy (Caldwell, 2005). The characteristics tied to high-yield activities are reflective of autonomously driven behaviors associated with, and implicated in, self-regulatory functioning. In fact, some argue they encourage youth in the production and adaptation driving their development (Larson, 2000). Three essential features of high-yield activities are linked to self-regulation including: (a) goal-oriented, (b) challenging, and (c) skill building (Dworkin, Larson, & Hansen, 2005). Each of these characteristics is discussed in greater detail below, because not only are they important factors contributing to satisfying recreational experiences, they are also implicated in developmental and self-regulatory processes.

Goal oriented. The first developmental attribute tied to *high-yield activities* is that they are goal-oriented. Having a goal for an activity identifies a beginning, middle, and end point that afford intentionality and direction towards reaching specified outcomes. This "temporal arc" suggests that the activity will require effort and persistence to achieve. Activities that lack a goal and do not require much effort generally are less engaging and less beneficial. This is similar to Larson's (2000) concept of *initiative*, which is defined as the ability to direct attention and effort towards achieving a goal. Larson found that youth participating in activities reported how to identify goals, sustain goal pursuit through perseverance, and manage time in order to achieve their goals. Yet, not all youth know how to set and achieve goals. In some low resource contexts, youth fail to learn how to set realistic goals that encourage exploration and

interest (Lerner, Freund, De Stanfis, & Habermas, 2001). Moreover, the goals young people construct reflect unique age-graded developmental tasks distinctive from adults and determine the roles they take on and how they self-evaluate (Nurmi, 1991). This in turn affects outcome expectancies, self-efficacy beliefs, goal selection, and the strategies used to achieve their goals (Massey, Gebhardt, & Garnefiski, 2008).

For that reason, young people need structural support and strategy instruction to learn how to set appropriate goals, use effective self-regulatory strategies to reach goals, make accurate assessments about their efforts, and know how to adaptively react to challenging situations (e.g., Dignath & Buttner, 2008). As such, when recreation activities are designed to encourage youth to set realistic goals and strategically plan how to achieve those goals, they learn important skills necessary for healthy development (e.g., Larson & Hansen, 2005).

Challenging. Activities that reflect an element of challenge, appropriately matched to skill level, result in optimal experiences associated with positive developmental outcomes (e.g., Csikszentmihalyi, 1990). On the other hand, activities lacking challenge often result in boredom and lack of engagement. Challenging and goal-directed activities offer a young person the opportunity to experience successes that contribute to greater levels of motivation, self-directed behaviors, and engagement (Larson, 2000). Structuring challenging experiences can also contribute to the development of self-regulation. A challenging context is one that directs youth to focus their attention, which in turn facilitates goal achievement (Rathunde, 2001). Consider a recreation professional who structures an activity in a way that does not challenge the participants and thus, does not require or elicit the use of self-regulation skills. Such an

experience limits the opportunity for youth to practice and improve their strategy use. On the other hand, if the activity is too difficult and the staff does not scaffold sufficient support, it is likely that their attempts to accomplish the task will be unsuccessful, resulting in poor evaluative judgments about strategy use and effectiveness (Diamond, 2010).

Skill building. Lastly, activities in recreation programs that focus on developing or improving a skill promote positive growth. The importance in developing competence is central within the youth development literature and shows that youth need opportunities to engage and grow their knowledge and skills *(*Pittman, Irby, Tolman, Yohalem, & Ferber, 2003*).* These skills often include both task-oriented (e.g., technical, academic, vocational) and social (e.g., team work, trust, communication) skills. Consider a young person enrolled in a rock-climbing club, a swimming league, ceramics class, or taking dancing lessons. The purpose behind each of these examples is to learn and improve in a given activity. These types of activities also provide opportunities for continued progress in competency directed towards mastery. This may further extend toward developing other important life skills such as leadership, communication, teamwork, conflict resolution, and coping skills. For example, a young person learning how to rock climb will typically learn how to tie knots, belay, and use appropriate climbing techniques. When structured effectively, such a program could also foster communication, collaboration, trust, and relationship-building skills. In both cases, skill development requires concerted effort that relies on important self-regulatory processes. For young people who likely need self-regulatory support, observing an adult role model or competent peer and then imitating self-regulatory efforts improves strategy use. This is

especially effective when they set clear goals, practice different ways to achieve those goals, and monitor the effectiveness of strategy use (Cleary, Zimmerman, & Keating, 2006).

Leveraging Interpersonal Relationships

Although good recreation programs with quality activities are desirable, relationships with adults remain one of the most important elements in an effective program. Youth professionals are frequently cited as a significant adult in the lives of youth (e.g., Blyth, Hill, & Thiel, 1982; Rhodes, 2002). Recreation professionals are expected to be fun, engaging, patient, responsive to needs, and committed to the success in youth. There can be little doubt as to the critical role they play as teachers and role models, who not only know how to teach activities, but how to foster engagement, interest, guide good decision making, and serve as a concrete example of success. As role models, youth may observe and compare their own performance to that of the role model, thus eliciting an opportunity for feedback and adoption of new behaviors (Rhodes, Spencer, Keller, Liang, & Noam 2006). The social interactions in recreation activities are one of the most frequently cited sources where natural mentoring-type relationships occur (Barrera & Bonds, 2005). It is of little surprise then that youth professionals are often looked to for knowledge, support, and advice as they provide important resources necessary for positive development (Dworkin, Larson, & Hansen, 2003). The fact that these relationships occur in a setting where youth report high levels of engagement (e.g., Larson, 2000) affords a powerful opportunity to maximize adult-youth and peer interactions that foster adaptive regulatory skills through a social scaffold.

Although there are varying approaches to interventions promoting self-regulation, there is general agreement that the processes driving its development lie in relationships through scaffolding (Diaz, Neal, & Amaya-Williams, 1990; Keating, 2004). Scaffolding is widely understood as a metaphor describing a supportive structure that provides guidance as the learner progressively assumes responsibility for the learning process within the learner's range of competence (Meyer, 1993). It focuses on a social-interactive process involving two key factors: the negotiation and collaborative construction of meaning, and the transfer of responsibility for learning from the instructor to the student (Meyer, 1993; Wood, Bruner & Ross, 1976).

In early childhood, this often takes place in parent-child dyads beginning in the observation and modeling of behaviors. Caring adults often act as an external source of regulation as a child develops the ability to independently self-regulate (Bell & Calkins, 2000). For example, in young children, an adult role model might initiate regulatory processes for the child by physically soothing, restructuring the environment, or taking care of the child's need. As children mature cognitively, however, they can engage in more sophisticated forms of self-regulation when faced with challenging situations. Over time, the young person becomes less reliant upon the adult support or "scaffold" as he or she learns how to practice and direct his or her own regulatory efforts. Yet the need for support is necessary and ongoing. On the other hand, exerting too much control as an external regulator undermines autonomy and effective self-regulatory development (Bell & Calkin, 2000). Further, parental practices are related to self-regulatory functioning at all stages of development (Cicchetti, Ganiban, & Barnett, 1991).

As opportunities for socialization increase, peers and salient adult figures (e.g., teachers, coaches) play an important role in developing self-regulatory skills (Diamond, 2010; Eisenberg, Spinard, & Eggum, 2010; Meyer, 1993). Drawing on this developmental premise of self-regulation, researchers have begun to apply principles of parent-child dyads and scaffolding self-regulation skills to teachers and youth mentors within education and youth development settings (e.g., Eynde, De Corte, & Verschaffel, 2007; Meyer & Turner, 2002; Wyman et al., 2010; Zimmerman, 2000).

Scaffolding adult-youth interaction. There are several self-regulation interventions that center around a scaffolding model between adults and youth (e.g., Cleary, Platten, & Nelson, 2008; Perels, Merget-Kullman, Wende, Schmitz, & Buchbinder, 2008; Wyman et al., 2010). One model of self-regulation that uses a scaffold suggests that the learner develop self-regulatory competence by first observing a model, emulating the model by practicing the skills, employing the skills with little support, and finally, adaptively and independently transferring skill use across a range of situations and contexts (Zimmerman, 2000). The crux of scaffolding, however, lies in the balance between creating a context of challenge while providing the necessary support within the learner's domain of competence. To this end, scaffolding acts as a form of 'other' or external regulation, where the more knowledgeable other is initially providing the regulation for the learner and slowly shifts regulatory responsibility over to the learner, as the individual becomes more competent and knowledgeable (Holton & Clarke, 2006; Meyer, 1993). Given what is known about scaffolding and the development of self-regulation, there are several interventions using scaffolding frameworks that are useful to explore and discuss, as they are especially applicable to the social dynamics within

recreation programs.

The Rochester Resilience Project (Wyman et al., 2010) is an exemplary model of an intervention that uses adult mentors to scaffold the development of emotion-self-regulatory skills in children. Adult mentors meet with students one-on-one and instruct, model, role play, and provide *in vivo* coaching that is tailored to meet the student's level of knowledge and self-regulatory skill. For instance, in the beginning of the intervention, the child and the mentor discuss or read a story to learn about cues that identify emotions. This might then lead to a role-playing session or putting on a skit where the child can observe the mentor modeling effective regulatory skills and begin to emulate and practice those skills. As the child develops greater self-awareness over the course of the intervention, the mentor slowly removes the scaffold and expects more self-directed behaviors from the child. Mentors also provide *in vivo* coaching, where the mentor gives feedback and support to the children as they use newly acquired skills. Using this scaffolding approach, children are taught skills related to monitoring their emotions (e.g., feelings check-in), self-control strategies (e.g., stepping back), and ways to maintain/regain equilibrium (e.g., using an imaginary umbrella to protect yourself). The results of this intervention are effective and show improved social skills, and fewer withdrawn, off-task, and behavioral problems (Wyman et al., 2010).

Other interventions use a comparable and process-oriented approach to developing self-regulatory skills. Developmental theories of learning and empirical research on self-regulation interventions suggest that self-regulation is strongly influenced by social processes supported through scaffolding. Scaffolding facilitates self-regulation by providing an environment that addresses socio-emotional needs, encourages

competence through increased knowledge and practice, and helps a young person become more autonomous and self-directed (Eynde, De Corte, & Verschaffel, 2007; Meyer & Turner, 2002). Further, Masten (2004) argued that social structures (family, schools, community organizations, etc.) should serve as a scaffold of support and constraint to help ensure the development of healthy regulatory functioning in youth. These findings, along with the developmental attributes associated with participation in recreation activities, suggest that the strong adult and peer relationships within recreation programs are essential mechanisms that foster self-regulation in youth.

Many self-regulation interventions suggest that through training, recreation staff have the means by which to teach self-regulatory skills through scaffolding. This can be as simple as engaging youth in conversation about their challenges, successes, and the accompanying thoughts, feelings, and behaviors to situations. While having a conversation may not appear overly beneficial, it is a critically important component to fostering self-regulation (e.g., Eisenberg, Spinard, & Eggum, 2010) and may provide a mechanism to encourage other positive outcomes (Hamilton & Darling, 2002). Providing a safe space for youth to voice concerns, insecurities, and successes allows for adults to transfer values, advice, and support (Rhodes, 2002).

Helping youth set goals, problem-solve, and identify ways to overcome challenging situations and maximize on the positive experiences is an effective tool to encourage higher order cognitive processing central to self-regulation (Bodrova & Leong, 2007). Using the social environment to teach youth how, when, where, and why to apply strategies by modeling such skills offers them an opportunity to learn about effective methods and raises their own self-awareness of what they are doing and why (e.g., Lakes

& Hoyt, 2004; Veenman, Van Hout-Wolters, & Afflerbach, 2006). While recreation professionals appear to be a natural fit to promote self-regulation through scaffolding, the role of peers is also an important factor contributing to positive outcomes.

Scaffolding peer relationships. Youth activities are widely believed to support interpersonal skills and the development of healthy social relationships (e.g., Barber, Stone, Hunt, & Eccles, 2005). For many reasons this is important, but especially as it points to an important resource in developing regulatory capital. A fundamental assumption of self-regulation is that it is guided by cultural norms insofar as they dictate standards of behaviors (Vohs & Baumeister, 2011). Thus, learning skills associated with positive social interactions and healthy relationships can reasonably be argued to support adaptive regulatory processes (Bell & Calkins, 2000). Activities are often a source of common ground that link peers to similar others. This, in turn, fosters friendships, sharing in experiences, and setting goals for the future (Brown, 1990). Youth who engage in these types of prosocial activities are significantly less likely than their counterparts to engage in a risky peer social environment (Barber et al., 2005). Thus, an important component to social scaffolding might involve connecting peers to other youth who share similar interests, and who will help each other regulate (Masten, 2004).

The positive social climate and development of strong peer relationships suggest that recreation programs can be a supportive environment to test, practice, and reflect on self-regulatory skills. For example, research has found that programs that target social skills improve youth's self-esteem and problem solving, which are implicated in self-regulatory processes (Collins, 2006; Mischna, Michalski, & Cumming, 2002). As the development of self-regulation originates through social relations, it is important to give

youth opportunities to other-regulate. Developmentally speaking, youth are able to detect errors in others' behavior before their own. Many activities in recreation programs involve group interactions and collaboration that offer youth a chance to take on different roles, both as leader and follower. Such opportunities allow youth to act as initiator, observer, and evaluator. By regulating another's behavior and offering feedback on task performance, they learn how to monitor and evaluate a peer's actions, which they can later apply to their own actions (Bodrova & Leong, 2007; Diamond, 2010).

Although research on understanding the interactions of various programming mechanisms affecting recreation outcomes is increasingly complex, one of the most consistently cited factors influencing outcomes is relationships. Recreation professionals act not only as teachers, but as role models. This uniquely positions them to teach youth how to set goals and plan appropriate strategies to apply and monitor their effectiveness. Capitalizing on the opportunity to scaffold adult and peer interactions through participation in recreation programs provides an untapped resource to promote self-regulatory skill development in youth. Thus, the unique social fabric within recreation programs affords meaningful interactions with adults and peers that may promote self-regulation in ways that other structured settings do not.

Conclusion

Self-regulation is a generative outcome essential to the positive development of youth. Despite this importance, it has received little attention in the recreation literature. Notwithstanding, recreation service providers have a long history in programming to achieve positive outcomes in youth. Yet, self-regulatory processes are the central and

mediating factor determining whether the attainment of positive outcomes occurs. Importantly, young people experience a period of significant changes that are further magnified by immature self-regulatory mechanisms that have not fully emerged and, as a result, they may not have the adequate skills to adaptively respond to challenging situations without sufficient external support (Masten, 2004). Many of the inherent qualities in recreation programs provide a context rich in regulatory capital that is well situated to encourage the development of self-regulation in youth.

In this chapter, I have suggested that there are three primary leverage points that recreation programs can utilize to promote self-regulation in youth. First, at the core of recreation programs, they are fun and enjoyable. The fact that recreation programs are fun and enjoyable provides the basis for intrinsic motivation, engagement, and positive emotions, all of which are conceptually and empirically linked to the development of self-regulation. Second, drawing on the concept of high yield activities, I argued that activities could be an important tool to promote self-regulation, particularly when activities are goal-oriented, challenging, and directed towards developing skills. Finally, recreation settings offer a positive social climate that can be an important social scaffold for adults to serve as role models and teach youth how to plan, guide, and monitor their efforts to achieve self-set goals. Peers can also serve as an important protective factor in recreation settings, when structured appropriately. These relationships offer opportunities for youth to learn how to support and regulate one another, which in turns helps them internalize regulatory competence (e.g., Diamond, 2010). As youth become more proficient in these skills, the scaffold is slowly removed, affording youth to engage in more autonomous behaviors predictive of healthy adjustment.

Table 2.1 highlights the key leverage points presented in this paper that recreation programs could utilize to promote self-regulation in youth. The use of fun, enjoyment, activities, and interpersonal relationships are specific recommendations that practitioners should consider adopting. However, the suggestions and applied examples in this table are broad in scope and thus highlight that there are many ways that these recommendations can be incorporated into a program. For example, under interpersonal relationships, the recommended strategy suggests that adult staff mentor youth. The example then suggests that one way to accomplish this is by doing brief "check-ins" that focus on relationship-building, goal-setting, monitoring strategy use, and evaluating performance. While this might be effective for some programs, it may not be for others. Furthermore, there are a number of different ways to accomplish the general point (mentoring) through different mediums ("informal check-ins", e-mentoring, coaching, formalized and structured mentoring sessions, etc.). Thus, the recommendations for practice are broad in scope and intentionally offered with flexibility to meet individual program needs.

Although many of the leverage points discussed and illustrated (see Table 2.1) in this chapter may seem intuitive, it is important to emphasize the need to move youth into an awareness of their knowledge and skills as a means to foster more sophisticated and effective forms of self-regulatory strategy use. As many of the experiences in recreation programs are new, it is oftentimes the staff's role to guide youth and help them to identify *how* to navigate through various situations, use different strategies, and the situations under which a particular strategy is most effective, and why (Dignath & Buttner, 2008). The framework to support this approach should begin with the co-creation of setting

Table 2.1 Applied examples on leveraging recreation program elements

Leverage Factor	Program Implementation Strategies	Example
Fun and Enjoyment		
Intrinsic motivation/ Engagement	Provide opportunities for participants to exert choice and have an authentic voice in decisions	Enrollment- Give participants options to choose which activities they enroll in (sports, outdoor education, theater, gymnastics, etc.).
	Give participants options	Have participants select and plan the activities that they want to do for the day.
Positive emotional response	Identify positive experiences	Team sports- Help youth identify and develop greater awareness of emotions during activities (e.g., "What was a high point during the game?" "Why?" "How can you achieve a similar feeling next time?")
Activities		
Goal-Oriented	Have individuals and groups set goals for activities	Art class- Ask participants to set goals (e.g., "What would you like to accomplish during this art session?")
	Have a purpose for the activity/program	Share a purpose for the activity/project (e.g., "By the end of this art class, I want you all to feel comfortable using a pottery wheel").
Challenging	Offer activities that adequately match challenge and abilities	Rock climbing- Ensure a range of challenging opportunities (e.g., easier rock climbing routes to more difficult climbing routes).
Skill building	Include activities in the program that progressively build skills and competence, and are directed towards mastery	Skateboarding class- Have participants learn about safety, basic maintenance, beginner, techniques, intermediate techniques, advanced techniques, and so forth.
Interpersonal Relationships		
Scaffolding adult-youth relationships	Have adult staff mentor youth participants	Have staff do one-on-one "check-ins" with youth participants to build relationships, set goals, strategize how to achieve goals, and monitor/evaluate goal progress.
Scaffolding peer relationships	Ensure productive social norms	Team-building activities-Teach youth how to give and receive specific feedback on performance (e.g., "What worked well?", "What did not work well?", "What would you do differently next time?")
	Have youth work in small groups	
	Pair older/younger youth together	

goals and identifying strategies between the staff and the youth. Adult staff can then provide the necessary guidance, as the youth gains competency, until the youth is the one primarily driving goal pursuit. Recreation programs are a promising context to implement a self-regulation program and extend important growth opportunities for young people. It is important to recognize, however, that no single youth development program can ensure that all youth experience and receive all the necessary nutriments associated with positive development. Nor do all youth programs elicit or support regulatory functioning in the same manner. That said, recreation programs provide a unique context that is especially well suited to leverage specific mechanisms to support self-regulation. Like any type of developmental process, self-regulation is supported by an environmental context, but originates in individual action. While recreation programs can have all the necessary ingredients that contribute to developmental outcomes, targeting the regulatory processes that drive that individual action is less clearly defined. Thus, understanding how to leverage recreation programs to build "regulatory capital" should be a primary focus for recreation professionals.

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CHAPTER 3

FOSTERING SELF-REGULATION SKILLS IN YOUTH: EXAMINING THE EFFECTS OF A MENTORING CURRICULUM IN A SUMMER RECREATION PROGRAM

Introduction

Youth face significant developmental changes that present both opportunities and pitfalls. Although this time in life has been described as a period of "storm and stress," such a deterministic perspective fails to acknowledge the potential to overcome vulnerabilities and the positive social and environmental influences that can mitigate some of these challenges. While youth are at an increasing vulnerability to engage in risk behaviors, development does not follow a deterministic pathway, nor does it occur in a vacuum. Rather, it is a product of biological processes intersecting with daily experiences and the settings in which young people live (Overton, 2006). Context, then, is a critical juncture from which youth access the nutriments that can support the still-maturing cognitive skills needed to navigate challenges. The cognitive skills driving healthy developmental trajectories lie in a youth's capacity to self-regulate. Self-regulation refers to the ability to calibrate emotional, behavioral, motivational, and cognitive efforts necessary to achieve a desired end state (Gestsdottir & Lerner, 2008). Learning how to effectively adapt behaviors, thoughts, and feelings, despite challenges, and reach self-set

goals is essential to young people's healthy development (Bronson, 2000; Dahl & Conway, 2009; Posner, Rothbart, Sheese, & Tang, 2007; Vohs & Baumeister, 2011).

Youth who are better able to self-regulate their own emotions, thoughts, motives, behaviors, and their environment are better prepared to succeed in school and work, and are more likely to develop into productive members of society. Studies have shown that youth who fail to effectively self-regulate report greater engagement in risk-taking behaviors (Magar, Phillips, & Hosie, 2008), substance abuse (Percy, 2008), depression and delinquency (Gestsdottir & Lerner, 2007), and psychopathology (Dahl & Conway, 2009). Conversely, youth who successfully self-regulate demonstrate greater resilience (Masten, 2004), self-esteem (Buckner, Mezzacappa, & Beardslee, 2003), and resistance to antisocial behavior and deviance (Gardner, Dishion, & Connell, 2008), and report behaviors associated with positive youth development ("5 C's" - Competence, Caring, Confidence, Connection, and Character; Gestsdottir & Lerner, 2007). Yet, for youth, who are undergoing significant changes in cognitive development, self-regulation is particularly effortful, due to still-maturing cognitive processes that effect how they employ self-regulatory strategies (Dahl, 2004). Consequently, identifying environmental influences that can support effective self-regulation in youth is of critical importance to promoting healthy development. Of interest to this research is examining the impact recreation professionals can have in promoting self-regulation through structured mentoring.

Many young people lack opportunities to connect and interact with adults to support, guide, and help them traverse the challenges faced throughout their youth. Many of the social structures in Western culture make meaningful youth-adult relationships

difficult to establish. Changes in family structure, higher teacher-student ratios, and more transient communities, result in youth having fewer and fewer options to connect with adults in meaningful ways. Youth increasingly rely on afterschool programs, summer camps, recreation programs, youth sports, and other community-based programs as a source of adult contact and support. Consequently, the staff who work in these programs become more visible adult figures, and often assume complex social roles as friends, parents, mentors, or teachers (e.g., Halpern, 2005; Hirsch, 2005).

One of the most salient features within recreation programs that contributes to youth development is adult staff. Staff serve as a guide for youth by modeling positive behaviors in fun and challenging activities that help youth learn problem-solving and decision-making skills (Caldwell & Witt, 2011). It is well established that adult figures (e.g., parents, teachers, coaches) act as a model for self-regulation, from which youth emulate their own regulatory behaviors (Bronson, 2000). Indeed, the basis for developing self-regulation emerges through relationships and continues to be supported by one's social network. Yet, in the context of recreation programs, the role that adult-youth relationships have in developing self-regulatory skills is not fully understood. Nevertheless, youth often report that one of the most important aspects of their experience in a youth program had to do with their relationships with staff (e.g., Boffey & Overtree, 2002). Yet, for many youth, healthy adult relationships do not exist. Consequently, having an adult figure to look up to and learn important life skills from may provide a transformative opportunity (Rhodes, 2005). Therefore, the purpose of this chapter was to examine the effects of a mentoring program on youth's self-regulation in a summer recreation program. It was predicted that youth receiving mentoring would show

greater improvement in self-regulation scores relative to youth at the comparison site who did not receive the mentoring.

The rest of this chapter is organized as follows: 1) an overview of literature that examines relevant conceptual and empirical research tying mentoring to the development of self-regulation in youth**;** 2) the methods used in the development and implementation of the mentoring program; 3) the results of the mentoring program; and 4) finally, a discussion of the implications for practice and research.

Mentoring Programs and Youth Development

Mentoring, whether through formal programs (e.g., Big Brother, Big Sister) or informally (e.g., naturally occurring relationships), is widely believed to be beneficial. It is often understood to consist of an older and younger person, where the older person is said to have the experience and perspective to provide guidance to the younger mentee (Rhodes, 2002). Mentoring is developmental in the sense that it emphasizes skill transference from mentor to mentee while focusing on moving the mentee towards goal achievement (Mullen, 2011). For youth, mentoring may fill an especially important role, as research shows that youth who have at least one caring adult in their lives are more likely to overcome negative influences (Werner, 1989). However, naturally occurring mentoring relationships may not be easily accessible for many youth. Structured mentoring programs may be one way to provide youth with access to adult support and guidance.

Mentoring programs offer youth a safe space to share ideas, aspirations, and uncertainties and, in turn, gain perspective from someone who is older and can help

support the youth as he/she pursues goals. Mentees benefit from observing their mentors model expert processes as they explain and demonstrate concepts and skills. Furthermore, mentors help to act as an external source of regulation to guide appropriate cognition, behavior, and emotion while mentees pursue goals. The idea of mentoring is appealing and resonates with families, youth workers, educators, funders, and policy makers, as there is a strong belief that mentoring positively impacts youth's lives.

The widespread belief that mentoring is inherently positive (reduces risky behaviors, substance abuse, delinquency, etc.) often overrides empirical evidence that is less conclusive and demonstrates only limited support for its effectiveness (Baker & McGuire, 2005). Evidence shows that mentoring youth can result in positive outcomes associated with physical health (e.g., Black et al., 2010), socio-emotional competence (Wyman et al., 2010), academic achievement (de Blank, 2009), and improved decision-making skills and goal-setting self-efficacy (Clarke, 2009). These studies show that mentoring can be an effective and flexible intervention strategy that has wide applicability across a range of contexts, participant demographics (e.g., age, gender, race), and mentoring program characteristics (e.g., structure of mentoring relationship, age of mentor, duration).

While some evidence is promising, other evidence shows that youth in mentoring programs may experience negative outcomes (e.g., Grossman & Rhodes, 2002). For example, youth who experience termination in a mentoring relationship have shown decreases in self-worth, academic competence, and other indicators of healthy functioning (Grossman & Rhodes). The authors speculated that perhaps the negative effects were a result of the youth feeling rejected. These findings underscore the

vulnerability youth may experience by engaging in a mentoring program. Such findings warrant caution and further research to understand what conditions result in effective and positive mentoring. Nevertheless, societal perceptions of mentoring programs' effectiveness remain positive (Baker & Maguire, 2005), and the diversification (e-mentoring, peer mentoring, group mentoring) and application of mentoring programs continues to widen (Dubois & Karcher, 2005). In fact, there are currently over 5000 mentoring programs that serve an estimated three million youth in the United States (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). The rapid pace with which mentoring programs expands further perpetuates the lack of research-driven practice informed by a strong theoretical premise (Dubois & Karcher). Although advancements have been made to provide conceptual models that explain mentoring relationships and outcomes (e.g., Rhodes, 2002), well-defined theoretical models that empirically link mentoring processes to outcomes are needed (Dubois et al., 2011).

The theoretical premise of this chapter is that the basis of successful youth development lies in the capacity to self-regulate, and the development of self-regulation occurs within the context of relationships. Although substantial evidence exists to support this premise, much of the research is contextually confined to family, academic, or clinical settings with little investigation into the role that relationships play in recreation programs. To this end, this chapter is grounded in a theoretical framework that links the development of self-regulation to adult-youth relationships. I posit that the relational basis of self-regulation is well aligned to contribute to the research on mentorship. For the purposes of this chapter, mentoring is defined as a relationship between an older more experienced adult and a younger person. The adult's role is to provide "ongoing

guidance, instruction, and encouragement aimed at developing the competence and character of the protégé" (Rhodes, 2002, p. 3).

Self-Regulation

There are a number of ways that self-regulation is conceptualized and depending on the discipline, its measurement, analysis, and relationship to outcomes can vary. Terms such as self-control, self-management, executive function, metacognition, and attentional control are often used interchangeably, creating a labyrinth of definitions and operationalizations of self-regulation. The entanglement, overlap, and sometimes unclear distinctions among these constructs have also resulted in imprecise measurement (Dinsmore, Alexander & Loughlin, 2008). Drawing on developmental and educational psychology as the theoretical premise framing this chapter, self-regulation refers to the capacity to direct feelings, thoughts, and actions to achieve goals (Guy, Isquith & Gioia, 2004; Zimmerman, 2000). Various disciplines operationalize self-regulation differently, which results in a plethora of identified core components that constitute self-regulation (e.g., Garner, 2009). For the purposes of this chapter, we emphasize the cognitive subdomains of self-regulation, as opposed to behavioral or emotional ones. These include a person's capacity to initiate behavior, select goals, organize strategies to problem solve and achieve goals, and to monitor and evaluate performance and working memory (Guy et al., 2004). Each of these management functions parallels maturation processes occurring in the prefrontal cortex. This developmental trajectory self-regulation follows is strongly influenced by environmental factors.

Development of Self-Regulation

While it is important to recognize developmental processes (e.g., myelination) that influence the maturation and capacity for self-regulation, the focus of this chapter is on external factors that drive the development of self-regulation. Of particular interest is the significant role that relationships play in supporting and interacting with biological processes to support the development of self-regulation. Strong adult-youth relationships are a powerful mechanism that facilitates the development of self-regulation. As Keating (2004) states, "The core of self-regulation and self-knowledge lies in relationships" (p. 76). Consistent with this belief, developmental theories of self-regulation and empirical evidence indicate that self-regulation emerges through relationships, beginning with a caring adult (e.g., parent) and extending to salient others (peers) as the child's social network increases (e.g., Eisenberg, Spinard, & Eggum, 2010). Parents, teachers, and other significant adult figures are looked to early on to provide a scaffold, or supportive structure, to help youth develop the self-regulatory skills necessary for successful transition into adulthood. This typically occurs by first observing an adult model the skill (e.g., plan how to achieve a goal), and then practicing the skill until one is able to independently employ the self-regulatory skills (Bodorva & Leong, 2007; Diaz, Neal, & Amaya-Williams, 1990). These relationships influence the norms and attitudes youth develop regarding the aspirations they have, and contribute to either promoting or detracting from self-regulatory efforts (Zimmerman, 2000). Furthermore, when youth are able to observe and imitate behavior from positive role models, such behaviors may enhance motivation and act as a source of inspiration to set and achieve new goals (Aarts, Gollwitzer, & Hassin, 2004; Schunk & Gunn, 1985). As role models, recreation

professionals serve as a concrete example of success by which youth can observe and adopt healthy behaviors (Rhodes, 2002; Rogoff, 1990). The social context within youth recreation programs affords meaningful interactions with adults where mentoring-type relationships can form (e.g., Barrera & Bonds, 2005; Bocarro & Witt, 2005), and it may also serve as a vehicle to promote self-regulation in youth.

A number of successful self-regulation interventions focus on developing self-regulation through mentor-like relationships (e.g., Cleary, Platten, & Nelson, 2008; Perels et al., 2008; Wyman et al., 2010). These interventions are typically implemented by teachers or other professionals and might easily be adapted to recreation professionals.

Self-Regulation Interventions

Education and cognitive development researchers have developed interventions that utilize contextual factors known to enhance self-regulatory competence in young people (e.g., Blair & Diamond, 2008; Boekaerts & Corno, 2005; Masten 2004). The development of self-regulation skills is both conceptually and empirically linked to relationships. Generally, these relationships act as a source of external regulation to teach, monitor, and encourage adaptive self-regulation through scaffolding support within the child's domain of development (Masten, 2004; Morris, Silk, Steinberg, Myers, & Robinson, 2007).

The goal of self-regulation interventions is to teach youth to successfully navigate and adapt to changing and sometimes challenging circumstances. These interventions typically emphasize learning how to set goals, assess decisions made, seek assistance, cope, monitor progress towards reaching goals, select and employ strategies to effectively

problem-solve, and evaluate the effectiveness of strategy use (e.g., Dignath & Buettner, 2008). An essential step in developing independent regulatory efforts is to direct youth to consider the how, when, why, and where to apply strategies and under what conditions such strategies are most effective (Veenman, Van Hout-Wolters & Afflerbach, 2006). These efforts require youth to develop a greater awareness of their skills, knowledge, emotions, motives, and behaviors and apply such information in adaptive ways across a range of contexts. Among some of the most successful interventions are those that utilize a self-regulation mentor or coach who acts as an external source of regulation (Cleary et al., 2008; Perels et al., 2008; Wyman et al., 2010)

Self-regulation mentoring models. There are a variety of self-regulation-related interventions for parents, schools, and clinical settings (e.g., Kusche & Greenburg, 1994; Shure, 2000). The mentoring/coaching programs developed by Wyman et al. (2010) and Cleary et al. (2008) are the most appropriate for adaptation to recreation programs. Each mentoring program has been implemented with youth and shown effective results in both clinical and academic contexts.

Wyman and colleagues (2010) present a scaffolding model that used a trained adult mentor to coach children (grade K-3) to develop emotional self-regulatory competence. Each mentor was trained in self-regulatory skills and how to implement a structured curriculum using a scaffolding model. Their intervention is based on the Rochester Resilience Project where mentors teach three core skills in a hierarchically ordered design: monitoring, self-control, and maintaining control. Over the course of 14 weeks, the mentor met with the child in a one-on-one session for 25 minutes. Using a developmental model of scaffolding, the mentor guided the child through the core skills

that progressed through the following eight steps: 1) The mentor models and verbally teaches the self-regulatory skill; 2) The child imitates and practices the skills and verbalizes the various components of the skill; 3) The mentor guides the child through role plays to incorporate the skills into different domains and contexts; 4) The mentor has the youth practice self-regulation skills and coaches when necessary; 5) The mentor provides the child with *in vivo* coaching; 6) The child begins to use skills in naturalistic contexts; 7) The mentor offers reinforcement when needed; and 8) The child initiates skill use without mentor prompting. Ideally, participants would move through the scaffold in a comparable manner. However, this is not always reasonable or possible. True to the scaffolding model, the mentor worked with the child and tailored the curriculum to meet the child's needs and to progress to ensure competence in the different content areas (e.g., self-control, monitoring, maintaining control).

Results of the program indicated that youth receiving the intervention showed reduced problem behavior, improved social skills, and fewer withdrawn and off-task behaviors. Furthermore, a 46% decrease in disciplinary referrals and a 43 % reduction in school suspension were observed. Girls in the intervention showed improvement in social skills; however, boys did not (Wyman et al., 2010). The results in this chapter are promising and suggest that mentoring can improve regulatory efforts in young children. Cleary's intervention is based off of Schunk and Zimmerman's (1998) self-regulated learning (SRL) model, which explains how someone engages in SRL strategies throughout a learning task (see Figure 3.1). The model consists of a cyclical process involving three phases, which are suggested to inform and affect actions that took place

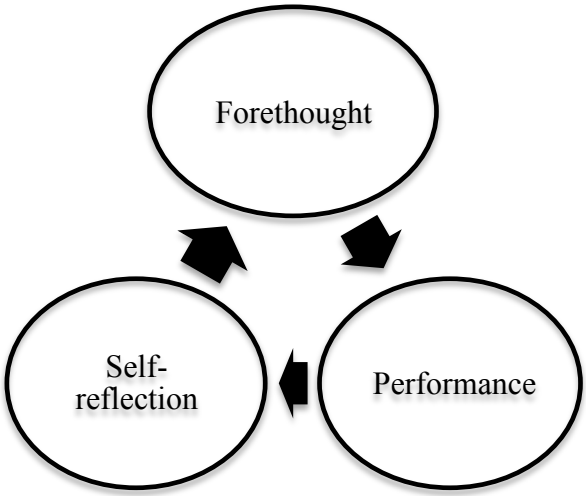

Figure 3.1. Process of developing self-regulation (adapted from Zimmerman, 2000)

in the proceeding phase. For example, the first phase, *forethought,* which involves setting a goal, will affect the second phase, *performance,* which requires an individual to take action towards their goal. These efforts will then affect the final phase, *self-reflection,* as the individual assesses how well their strategy implementation was in achieving their goal. This will, in turn, start the cycle again, where an individual is setting (or adjusting) goals, changing strategy use to achieve those goals, and so forth. In sum, the three phases of the cycle are: forethought (actions taken prior to learning efforts), performance (efforts employed during the tasks), and self-reflection (efforts following the task).

Each phase in the cycle encompasses a number of subprocesses. The sub-processes involved in the forethought phase are setting goals, strategically planning strategies to achieve those goals, and self-motivational beliefs. These motivational beliefs include self-efficacy and intrinsic interest directed towards a particular goal. The performance control phase, on the other hand, involves processes directed towards

guiding and monitoring efforts and includes techniques such as, imagery or mentally simulating how one might achieve a goal, focused and directed attention towards goal pursuit, self-instruction, recording one's progress, and experimenting with different strategies. The self-reflection phase incorporates techniques such as evaluating one's effort, and attributing successes and failures to specific strategic efforts. These processes then lend to varying levels of satisfactions that influence whether the individual will continue to engage in adaptive or maladaptive strategies directed towards goal pursuit (Zimmerman, 2000). Furthermore, as this model assumes that the development of self-regulation occurs through a more knowledgeable other instructing, modeling, and guiding increasingly self-regulated behaviors, a form of scaffolding is theorized to influence each phase of the process (Zimmerman).

This model has been used in a number of academic and sport studies showing the effectiveness of targeting self-regulation through interventions (e.g., Cleary, Zimmerman, & Keating, 2006; Cleary et al., 2008; Kisantas & Zimmerman, 1996; Oettingen, Honig, & Gollwitzer, 2000). In an experimental study that involved an intervention examining the additive effects of the forethought, performance, and self-reflective phases, results indicated a significant difference between participants who received only the forethought phase from those who received the forethought and performance phase and participants who received all three phases. Further, results showed that participants who received all three phases of self-regulation training during a novel task demonstrated the most adaptive and motivational profiles (Cleary et al., 2006). Further, in a meta-analysis identifying components attributed to fostering self-regulation, the research consistently shows that youth who utilize similar strategies achieve greater adaptive functioning in

challenging situations, sustain learning motivation, and persist in efforts directed towards attaining goals (e.g., Dignath & Buettner, 2008).

Based on the SRL model, Cleary and colleagues' (2008) developed the Self-Regulation Empowerment Program (SREP). This program focused on teaching high school students self-regulated learning strategies to improve academic outcomes (i.e., learning processes, grades). A Self-Regulation Coach (SRC) met with a group of students twice a week for 11 weeks for a total of 23 sessions. Each module in the SREP curriculum focused on moving students through the forethought, performance, and reflection phases of the self-regulated learning model. Students in the intervention learned how to self-set goals, strategically plan, monitor their progress, and how to make effective attributions and evaluations of performance. Results of the study showed improvements on academic outcomes (i.e., grades) relative to the comparison group. Furthermore, students in the intervention exhibited greater use of adaptive (e.g., help seeking) self-regulation processes and fewer maladaptive (e.g., disengagement) strategies. Students also demonstrated greater initiative in self-directed behaviors to improve their own learning processes.

With slight modification, and given the current literature and theory, these two interventions provided the basis for the mentoring program presented in this chapter. Each of the interventions was adapted for the present study and will hereafter be referred to as the Self-Regulation Mentoring Program (SRMP). The SRMP draws on Wyman's (2010) scaffolding approach, which is grounded in developmental theories of learning (Wood, Bruner, & Ross, 1976). Wyman's program provides an explicit scaffold (i.e., teaching strategies) that can help mentors deliver information in ways that progressively

require greater participant-directed behaviors. In addition, one of the strengths of this program is the use of *in vivo* coaching. *In vivo* coaching, also known as side-by-side coaching, refers to the notion of giving feedback in context as performance is occurring, or immediately after. Providing feedback that is immediate and relevant allows the mentors to address behaviors and emotions and provide reinforcement or suggestions for alternative strategies. The SRMP utilizes Wyman's implementation methods that were defined by the scaffolding framework referred to earlier. The SRMP asks mentors to then guide mentees through the SRL cycle of setting, pursing, and evaluating goals using these scaffolding strategies.

In contrast to Wyman's program, the content of which focuses on improving emotion regulation, Cleary's intervention provides the content for the SRMP and focuses on improving the metacognitive processes associated with self-regulation (goal setting, planning, monitoring, self-evaluation). Specifically, the SRMP focuses on youth building rapport with their mentor, learning how to set goals, strategically planning how to achieve those goals, practicing strategies and monitoring performance, and finally, evaluating and making judgments and attributions about performance. Each of these content areas coincides with Cleary's intervention components. The SRMP also holds to the theoretical premise that self-regulation is adopted through a cyclical phase, thus the SRMP moves participants through the forethought, performance, and self-reflection phases.

Taken together, these programs provide a dynamic framework for the mentor and participant to intentionally work together to pursue and achieve self-set goals. The curriculum centered around eight sessions that target relationship building, setting goals,

planning, and evaluating efforts. Each of the sessions is scaffolded to progressively instill greater self-directed behaviors. Although the mentoring sessions for this study were shorter in duration than either of the previous studies, the mentors in this study were on site every day of the program. Consequently, their contact time and opportunity to provide *in vivo* coaching and feedback significantly increased.

Present study

The SRMP emphasizes the role of the mentor while acknowledging the needs and goals of the participant. Within the context of a relationship to an adult mentor, youth learned important cognitive skills (setting goals, planning, monitoring, experimenting with different strategies, self-recording, evaluating efforts, and making attributions) that are consistent with the SRL model (Schunk & Zimmerman, 1989). It was theorized that learning these skills would help them strengthen their self-regulatory skills as a means to achieve relevant goals within the context of participating in a recreation program. The primary question driving this study was to determine the intervention effect on youth participants' improvement in self-regulation. The guiding hypothesis in this study was as follows: based on this intervention's focus on cognitive skills, it was hypothesized that program participants in the treatment site would show greater positive changes in self-regulation behaviors than participants in the comparison group.

Methods

Design

A quasi-experimental design was utilized that compared two matched sets of youth recreation programs that operated under the same umbrella organization. The program formally allocated time to senior-level program staff to act as mentors. One of the sites received mentors (the treatment site) and the other did not receive mentors (the comparison site)**.** Self-regulation scores were collected from both sites during the first week of the program (baseline), during week 5, and during the last week of the summer program (week 8). Participants were enrolled in a summer youth recreation program that ran for 8 weeks in the summer of 2011.

The program is part of an out-of-school recreation program run out of a local municipal parks and recreation department. Program selection was primarily based on identifying a program that met criteria consistent with a positive youth development setting (e.g., Eccles & Gootman, 2002) that also emphasized recreation participation. The summer program provides a wide range of recreation offerings (e.g., visual arts, outdoor adventure activities, sports) consistent with the characteristics defining high-yield activities (goal oriented, challenging, skill building), and a social context designed to foster an inclusive and caring environment.

The program has a total of four sites that serve youth and their families in the local metropolitan Salt Lake City area. Two sites were selected by the program administrator and were identified as the two most comparable sites. One site served as a treatment group, where participants would receive the mentoring intervention, the second

site acted as a matched comparison (no mentoring intervention) to test for differences that could be attributed to the intervention.

Participants

Youth 9-14 years of age who were enrolled for all 8 weeks of the summer program were invited to participate in the study. Each of the study sites enrolled approximately 55 youth between the ages of 9-14, 64 of which participated in this study. The sample was predominately male (75%) with a smaller percentage of females (25%). Fifty percent of the sample was Caucasian, 23.4% Hispanic, 7% Black, 4.6% Asian, and4.6% identified as other. The average age of participants was 11.3 years old. Over 80% of the participants qualified for reduced tuition based upon family income (see Table 3.1).

Mentoring Curriculum

Once a week, participants met with their mentors for ~15 minutes to discuss how their week had been (successes and challenges) and work on setting and achieving goals. Each of these sessions follows an outlined structure to establish a consistent routine. The structure and implementation of these sessions held to the following scaffolding format:1) Check-in with the youth; 2) Set and review goals; 3) Introduce the topic for the week; 4) Provide instruction; 5) Model strategy use; 6) Purposeful practice; 7) Observation; 8) In vivo coaching during the week; 9) Reinforcement; and 10) Youth expresses self-directed skill use. Below is a brief description of each session.

Table 3.1. Sample characteristics by condition

	Intervention Site (n = 29)	Comparison Site (n =35)
Sex		
Male	21 (72.4%)	27 (77.1%)
Female	8 (27.6%)	8 (22.9%)
Ethnicity		
Asian	3 (10.3%)	0 (0%)
Black	3 (10.3%)	2 (5.7%)
Hispanic	9 (31%)	6 (17.1%)
White	12 (41%)	26 (74%)
Other	2 (6.8%)	1 (2.8%)
Age		
9	5 (17.2%)	4 (11.4%)
10	2 (6.9%)	7 (20%)
11	10 (34.4%)	10 (28.5%)
12	4 (13.7%)	6 (17.1%)
13	7 (24.1%)	6 (17.1%)
14	1 (3.8%)	1 (2.8%)
Qualified for reduced tuition	26(89.6%)	26 (74.2%)

Session 1. In this session, the participant and mentor will have an opportunity to get to know one another. The underlying premise of this session is that in order to effectively explore one's goals and experiences throughout the summer program, it is necessary to establish a safe and supportive environment. The key topic for this session is to encourage participant to think about what they want to achieve over the course of the summer.

Session 2. This lesson builds on the previous session with a more directed exploration to identify specific goals to achieve over the course of the summer. Mentors will guide a discussion on what goals are and have participants brainstorm a list of social (e.g., making more friends, teamwork, better communication skills, getting along with peers) and task/activity-oriented (e.g., learn how to_____, perform better at_____) goals they have for the summer. Mentors will use the SMART (Specific, Measurable,

Attainable, Reasonable, Timely) method to identify two goals to work on over the summer.

Session 3. In session three, mentors will work with the youth to help establish a strategy outline to define how they are going to work towards achieving their goal over the course of the summer. Mentors will model how to develop a strategy outline consistent with the SMART method, and then provide the participants an opportunity to emulate the mentor by following a similar process.

Session 4. In this session, participants will apply their strategy outline by engaging in role-plays to evaluate the strengths and weaknesses of each strategy. For example, participants and mentors will simulate what an outcome might be from using a particular strategy. From this, participants will be able to further refine and develop a plan of action.

Session 5. In session five, participants will learn strategies (e.g., self-recording) to help them monitor and track their progress. Participants will reflect on their goal pursuit progress and learn how to apply self-observing/monitoring strategies while working on their goal to maximize their efforts.

Session 6. Participants will engage in a self-reflective process to evaluate the effectiveness of their strategy use. Participants will learn how to compare the outcome of their efforts in relation to their goal. From this, they will engage in efforts to determine the cause(s) of their performance and learn how to objectively identify causal attributions.

Session 7. Participants will explore the results of their strategy use, and how they might alter their approach to maximize their performance. This might entail adapting goals, or selecting a more effective strategy.

Session 8. The final session is a time to reflect on the participant's experience over the course of the summer. Mentors will guide participants through an exit interview designed to determine what the participant's learned and how they described the learning process (i.e., what strategies they used to achieve their goals).

Following each session, the mentor provided *in vivo* coaching to address participant progress and provide reinforcement of alternative and more adaptive strategy use. Throughout the summer, the mentor made participant observations to provide scaffolded and tailored instruction during mentoring sessions that reflected the participant's development and progress. See Figure 3.2 for a proposed model explicating the relationship between curricular components, implementations, and outcome variables. As illustrated in Figure 3.2, the core components of the curriculum, scaffolding, and the three phases of the SRL cycle drive the development of self-regulation. As noted before, self-regulation is comprised of five specific subdomains and these include working memory, initiate, planning and organizing, organization of materials, and monitoring. These five subdomains are components of the Metacognition Index (Guy et al., 2004), which measures self-regulation. Thus, improving self-regulation is argued to occur by scaffolding goal pursuit processes linked to the forethought, performance, and self-reflection phases (Zimmerman, 2000).

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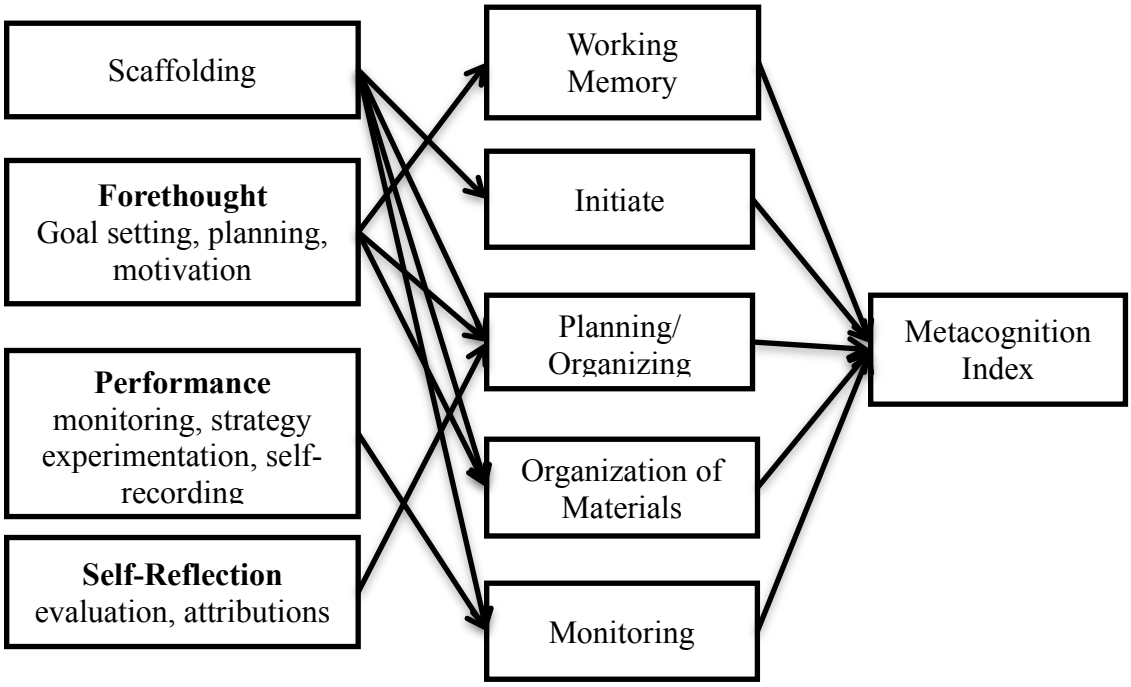

Figure 3.2. Proposed relationship between curricular and implementation components and outcome variables

Measures

The primary dependent variable was self-regulation, which was measured using the Metacognition Index (MI) from the Behavior Rating Inventory of Executive Function-Teacher Form (BRIEF-T; Guy et al., 2004). The BRIEF-T is a standardized measure designed to capture youth's ages 5-18 ability to regulate and manage behavior.

The BRIEF-T assesses everyday behaviors associated with specific domains of self-regulated problem-solving and social functioning. The BRIEF-T has established convergent validity with other measures related to learning skills, inattention, and impulsivity (Guy et al., 2004). The BRIEF-T also has demonstrated divergent validity against measures of emotional and behavioral functioning. The internal consistency of the MI subscales has an established acceptable alpha coefficient ranging from .84-.95. The

BRIEF-T is an observational measure that includes nine subscales and two clinical scales. For this study, the five subscales from the MI were utilized.

The MI specifically assesses a youth's ability to cognitively self-manage and monitor performance. The MI was considered an appropriate measure to assess specific domains of self-regulation within a youth recreation program context. The MI consists of a total of 44 items from the following five subscales: working memory, initiate, planning and organizing, organization of materials, and monitoring.

The Working Memory subscale captures the ability to retrieve information and direct attention to completing a task. Items include: *forgets what he/she was doing* and *has trouble remembering things, even for a few minutes.* These items represent the significant role that working memory plays in completing multistep activities and complex tasks (Guy et al., 2004), making it especially pertinent to recreation activities and experiences. Working memory is a cognitive processing component of self-regulation and is tied to the planning and monitoring subdomains of self-regulation (Jonides, 1995). As working memory is not an explicit and tested outcome tied to Zimmerman or Wyman's models, it is theorized from other research that the intervention component tied to having and setting goals will enhance working memory functioning (see Figure 3.2; Linnenbrink, Ryan, Pintrich, 1999).

Initiate represents a young person's ability to independently generate ideas and solutions to solving problems. Items include: *is not a self-starter*, *has problems coming up with different ways to solve a problem, and does not take initiative.* The SRL reasons that as an individual moves through the different phases of self-regulation and progressively becomes more competent, the individual will become increasingly self-

directed in their efforts (Zimmerman, 2000). Evidence, for example, shows that when participants demonstrate feelings of satisfaction during the self-reflective phase (SRL), motivation and self-efficacy beliefs increase, thereby facilitating task interest and a desire to engage in continued effort to achieve goals (Zimmerman & Kitsantas, 1999). Thus, both the curriculum (particularly the self-reflection and evaluation components) and use of a scaffold are theorized to support and promote initiative.

The Planning and Organizing subscale reflects behaviors associated with a person's capacity to set goals, and identifies the necessary steps involved to accomplish a task. Items on this subscale include: *underestimates time needed to finish a task,* and *has trouble moving from one activity to the next.* Knowing how to organize and strategically plan how to problem solve and achieve one's goals is a critical component to effective self-regulation (Gollwitzer, Fujita & Oettingen, 2004). For youth, observing and learning how to plan to achieve their goals is theorized to promote greater planning and organizing functioning. According to Zimmerman's SRL cycle, evaluating and monitoring efforts are linked to future planning and organizing efforts. Therefore, the curricular components within the forethought and self-reflection phases are reasoned to promote planning and organizing.

Similar to Planning and Organizing, Organization of Material gauges a youth's ability to keep track of items and maintain orderliness in work and play spaces. Items on this subscale include the following: *leaves a trail of belongings wherever he/she goes,* and *leaves messes that others have to clean up*. Teaching youth how to organize is one effective way to promote greater organizational functioning (Guy et al., 2004). A key aspect of the curriculum focuses on youth mentees identifying the resources that they will

need to accomplish their goals. Learning and practicing such processes are suggested to improve organizational capabilities tied to self-regulation.

Finally, the Monitoring subscale assesses the ability to check work and performance during and immediately after finishing a task. Items include *makes careless errors* and *work is sloppy*. The importance of increasing self-awareness is a key component in the interventions of both Cleary et al. (2008) and Wyman et al. (2010) and plays a central role in the curriculum used in this study. Teaching youth how to become more self-aware and gauge their efforts as they occur is a key element of the curriculum and is theorized to enhance monitoring processes (e.g., Lakes & Hoyt, 2004).

The MI was designed for teachers or other adults who are knowledgeable about the child's behavior in a variety of settings (in this case, the program staff score the participants). Completion of the MI takes 5-7 minutes. Responses range from 1 (Never) to 3 (Often). The majority of the items are not specific to school settings; the four items that are specific to school settings were slightly modified to reflect the recreation program context (i.e., items with the term "homework" were substituted with "task" or "activity").

Procedures

Observational data collection. I met with staff at both data collection sites to provide an overview of the study, answer any questions, and train the program staff in how to score the MI. These meetings took place at the summer staff training prior to the first day of the program starting. Because many of the youth enrolled in the program participate in the program year-round, staff were asked to complete the MI on

participants with whom they had the most prior experience. Staff, trained on how to complete the MI, scored each enrolled participant at the end of week 1, in the middle of week 5, and at the end of week 8. This schedule allowed for 1 week of observation prior to completing the baseline MI and then allowed 3-and-a-half weeks between each of the latter two observations (midprogram and postprogram).

Demographic data were collected from program participants using their summer program registration forms. Demographic data included age, race, sex, length of experience in the program, and whether participants qualified for reduced tuition. Names were removed from the forms and a unique numeric identifier known only to the program staff was used to correspond to the MI scores.

Consent and assent. Prior to the beginning of the summer program, parents attended a program orientation where they were given a cover sheet explaining the purpose of the study with a consent form included in the packet. The letter explained the purposes of the research, confidentiality of responses, and contact information should there be questions. The cover letter, consent form, assent form, and use of the MI were approved by the University of Utah's Institutional Review Board and by the Program Manager and Coordinators for the sites where data were collected.

Mentor training. Before the summer program began, three mentors completed a 6-hour training session that introduced the concept of self-regulation to mentoring within a recreation program. The first part of the training introduced mentors to youth development and the role of self-regulation in driving healthy development. The second phase of the training applied Zimmerman's (2000) self-regulated learning model on how to set appropriate goals, identify strategies to reach the goal, monitor progress, and

evaluate the outcome of efforts. Mentors engaged in various experiential activities to more fully understand the SR cycle and how it is expressed through behavior, emotion, cognition, and motivation throughout a task. The last part of the training focused on the scaffolding component, where mentors engaged in simulations to practice providing participants with verbal instruction, modeling self-regulation strategy use, role playing, purposeful skill practice, *in vivo* coaching, and offering reinforcement on positive behaviors. Mentors then worked through the curriculum (Morgan, 2011) to practice going through the sessions, using appropriate communicative skills, and pacing the lessons in ways that were individualized to the participant's level of learning and progress.

Curriculum implementation. Mentors met weekly for 15 minutes with each of the enrolled participants at the intervention sites during weeks 1 through 8. The mentor and participant worked collaboratively to set and/or review participant goals, identify strategies to achieve those goals, develop a plan on the most appropriate time to implement strategies, monitor goal pursuit progress, and evaluate strategy use. Over the eight sessions, the mentors worked to move the participants through the content using the scaffold. Following these sessions, the mentor provided *in vivo* coaching to address participant feelings and reactions as they occurred, and provided encouragement and reinforcement of alternative and more adaptive strategy use. Furthermore, the research team conducted bi-weekly check-ins with the staff to ensure program implementation effectiveness and fidelity.

Data Analysis

Using a slopes-as-outcomes model, I tested the effects of the mentoring program by looking at the rate of change in self-regulation scores between the treatment and comparison sites. The main analysis involved a repeated measures multivariate analysis of variance (RM MANOVA) on the five subscales of the Metacognition Index (working memory, planning, organization of materials, initiate, and monitoring) to determine whether there was a statistically significant treatment effect. Following significance, univariate analysis of variance (ANOVA) were employed to examine differences.

Results

Of the initial 85 participants who consented to participate, 14 participants failed to provide complete data on the MI and could not be included in the analysis. The data were examined for univariate ($n = 0$) and multivariate outliers ($n = 1$), which were retained due to minimal influence. The data were further screened for missing scores. Less than one half of one percent of the data from the MI were missing. Subscales with more than two missing scores were not retained (Guy et al., 2004). All other missing data were replaced with a score of 1, per the MI scoring procedures (Guy et al.). In addition, one of the rater's initial participant ratings was consistently higher than the other raters and exhibited a ceiling effect, and was not considered representative of the sample. Thus, all of the participants ($n = 7$) from this rater were eliminated. The raters were further assessed for inconsistency in observations on the MI. The MI has an embedded Inconsistency Scale that can be scored to assess how inconsistent a rater answered similar items on the MI. Scores were classified as acceptable, questionable, or inconsistent. All

but one case had scores deemed "acceptable" on the inconsistency scale. The one case that was "questionable" was retained due to minimal influence (Guy et al.). Additionally, participants' missing the first or last administration of the MI were excluded. The final sample consisted of 64 participants available for hypothesis testing.

Hypothesis Tests

A repeated measures multivariate analysis of variance (RM MANOVA) was conducted to determine differences in the MI subscale slope scores based on site. Because I was interested in the rate of change on the dependent variables, and due to varied baseline scores by both site and individual, the slopes for each of the dependent variables were calculated and transformed into a new variable prior to conducting the MANOVA. Slope scores were generated from time 1- time 2 (3.5 Weeks), and time 2 – time 3 (3.5 Weeks). The mean and standard deviation of the slopes for each of the dependent variables are provided below (see Table 3.2). As Table 3.2 shows, the means for the treatment, relative to the comparison group, show larger positive change scores at both time 1–time 2 and time 2-time 3, with the exception of working memory and initiate at time 1-time 2. At time 2-time 3, the treatment group revealed on average nearly four times greater improvement in scores across all dependent variables over the comparison group. Both the treatment and comparison sites showed consistent improvements across all dependent variables for both time 1-time 2 and time 2-time 3. Results from the RM MANOVA reveal significant differences among the treatment and comparison conditions on the dependent variables. Box's test was significant, indicating a violation of the assumption of equal covariance.

Table 3.2. Means and standard deviations for MI subscales slopes

Dependent Variables	Time 1-Time 2 Slope Mean (SD)		Time 2-Time 3 Slope Mean (SD)	
	Comparison	**Treatment**	**Comparison**	**Treatment**
Working Memory	.63(3.79)	-.03 (4.29)	1.22 (3.42)	2.41 (4.19)
Planning and Organizing	.57(3.37)	1.03 (4.91)	.71 (3.37)	2.66 (3.46)
Organization of Materials	.51 (2.62)	1.03 (2.74)	.17 (2.58)	1.48 (2.35)
Initiate	.14 (2.59)	-.24 (4.40)	1.00 (2.52)	2.31 (4.00)
Monitoring	.29 (3.10)	.41 (5.54)	1.00 (3.41)	2.03 (3.18)

To account for this, Pillai's Trace was used as the test statistic. The Pillai's Trace criteria indicates significant differences in MI scores over time based on site; Pillai's Trace = .234, $F(5, 57) = 3.49$, $p < .008$, multivariate partial $\eta^2 = .234$. Following significant multivariate results, follow-up univariate ANOVAs, one for each dependent variable, were examined. Results indicated a significant site-by-time interaction effect for the Planning, $F_{(1, 61)} = 4.86$, $p = .03$, partial $\eta^2 = .074$, and Organization of Materials variables, $F_{(1, 61)} = 6.91$, $p = .01$, partial $\eta^2 = .102$. However, nonsignificant effects were observed for Initiate, $F_{(1, 61)} = 1.35$, $p > .05$, Monitoring, $F_{(1, 61)} = .779$, $p > .05$, and Working Memory, $F_{(1, 61)} = .177$, $p > .05$. Thus, the treatment site exhibited greater increases over time compared to the comparison site. Specifically, planning and organization of materials increased more rapidly at the treatment site than the comparison site.

Discussion

The purpose of this chapter was to examine the effect of a mentoring program in promoting self-regulation in youth enrolled in a recreation program. The intervention was predicated on the assumption that mentoring relationships can be a powerful mechanism that promotes greater self-regulation in youth. Youth participants in this study engaged in

an 8-week mentoring curriculum that emphasized building relationships, setting goals, selecting strategies necessary to achieve goals, and evaluating one's efforts.

Results show that the mentoring program had a positive impact on youth participants' self-regulation scores. Participants at the treatment site showed a significantly greater positive rate of change in their ability to plan and organize than the comparison site. In addition, the substantially larger change observed between times 2-time 3 from times 1- time 2 might indicate a cumulative treatment effect, suggesting that the youth were increasingly benefiting from the mentoring. Collectively, the results indicated a promising trend towards greater self-regulation on all five dependent variables over time at the site with structured mentoring.

The findings from this study add to the research on mentoring by offering a theoretical framework that positions adult-youth relationships as a mechanism to promote greater self-regulation in youth. More specifically, this study builds on prior interventions to form a self-regulation mentoring program model that explicates how specific mentoring mechanisms promote self-regulation. In the case of this study, mentoring interactions were based on a scaffolding model that moved participants through the forethought, performance, and self-reflective phases of the SRL cycle (Zimmerman, 2000). To this end, the results provide important implications for both practice and research. These implications offer leverage points for practitioners and researchers to use to better position recreation programs as a context for youth to sustain healthy developmental trajectories.

Implications

Three key implications can be drawn from the results presented in this chapter. First, the results indicate that formal and targeted mentoring support the development of self-regulation in youth. The mentoring program was developed around a strong theoretical premise that targeted specific outcomes (i.e., self-regulation). Although the treatment group showed gains across all five dependent variables, there were significant gains in planning and organizing behaviors. The fact that there were significant gains in planning and organization of materials in contrast to the other dependent variables suggests that something about the mentoring emphasized the use of those skills more than the other skills. Planning skills are critical self-regulatory processes tied to knowing how to set and achieve goals. Organization of materials, on the other hand, is an indicator of a youth's ability to keep track of one's things and maintain a sense of orderliness. It may be that providing structured opportunities for youth to engage with their mentors provided critical moments in the week that focused the youth on what they were doing (or not) to achieve their goals. In turn, the emphasis on learning during the mentoring session may have elicited more planning and organizing skills as opposed to skills that necessitate more independent effort (e.g., self-monitoring).

For example, despite the fact that the SRMP targeted four distinct domains tied to self-regulation, the mentoring sessions centered on discussing and strategizing how to apply self-regulatory skills in different situations. Inherent to discussing and strategizing is the use of planning and organizing skills. So although mentors and mentees discussed and practiced evaluating and self-monitoring, the practice of those skills may not have elicited the use of the skills in the same way that planning and organizing were

consistently employed. As such, the lack of continuous use and reinforcement of these skills throughout the week may explain why youth did not show significant gains in monitoring, working memory, or initiative. Nonetheless, the findings are important for recreation professionals to consider when working with youth. It appears that providing formalized opportunities for youth to set and achieve goals in the context of a relationship to a mentor may elicit the use of planning and organizing skills that support the development of self-regulation. These promising findings are important for recreation professionals to articulate to staff, funders, parents, community organizations, and policy makers, as a way to emphasize the relevance of recreation programs as a vital developmental input.

Secondly, the results suggest that intentional program design may be a critical factor contributing to the positive outcomes observed. The first aspect of designing the program entailed establishing a theoretical link between program practices and outcomes (see Chapter 2). The second consideration involved assessing the context, staff, and program participants to establish curricular and implementation guidelines congruent with the agency's mission, resources, and limitations. A model illustrating the self-regulation mentoring program was then developed to detail the relation between theory, program practices, and agency resources to the prescribed outcomes (Morgan, 2011). The importance of the design phase cannot be overstated as a crucial component that impacted the results of the program. Indeed, the results of the study substantiate the importance of using an intentional program design that links theory to practice.

Consider first that both the treatment and comparison sites showed gains in self-regulation. This is not surprising as the comparison site engaged in many program

practices supportive of self-regulation (e.g., offer fun and engaging activities, have caring and involved staff, provide activities that are goal-oriented). However, key in these findings is that across all five dependent variables, the treatment site showed greater improvements in self-regulation over the comparison site. This suggests that the use of an intentional program design detailing important developmental inputs (e.g., mentoring, scaffolding) can maximize program outcome achievement and demonstrate greater program efficacy. For example, staff at the treatment site were trained in using specific program processes that were designed to foster self-regulation. It is with some measure of confidence, then, that the positive outcomes observed are attributable to the design and implementation of the program.

It is important to point out another possible explanation for the differences observed in MI scores between the two sites. As evidenced by the scores between the two sites, the comparison site started the summer with higher self-regulation scores than the treatment site. This may suggest that the comparison site may have had less room to improve self-regulated behaviors than the treatment site. Thus, intentionally designed and targeted programs may be more important for participants with lower initial abilities to self-regulate. Program participants already able to self-regulate may still realize benefits from youth mentoring, but the benefits may be broader than self-regulatory strategies or may be attributable to other portions of the recreation program. Finally, and consistent with other literature, the results indicated that adult-youth interactions are a viable relational mechanism for youth to learn self-regulatory skills (Cleary et al., 2008; Wyman et al., 2010). This chapter, however, extends that research by applying an integrated mentoring model to a recreation context. Recognizing that mentoring in this study was

situated in an adult-youth relationship, the basis for these interactions offer important implications for recreation professionals.

The mentor-mentee interactions were intentionally designed to encourage youth to engage in more self-directed and autonomous behaviors through the use of scaffolding techniques. The youth development literature emphasizes the importance of having youth actively participate in creating and driving their own experiences. Allowing youth to have voice, options, and choice is known to contribute to fostering developmental outcomes (e.g., Ellis & Caldwell, 2005). In the case of this chapter, youth were asked to work with their mentor to select appropriate goals, as opposed to the adult-mentor assigning a goal. Some researchers have argued that self-selecting a goal may increase one's commitment and motivation to achieve the goal and thus, improve self-regulation (Schunk, 1995). On the other hand, some evidence indicates that assigned goals improve performance over self-selected goals because an individual may set an easy goal (Gauggel, Hoop, & Werner, 2002; Lee & Edwards, 1984).

To address the tension of whether assigned or self-selected goals are more efficacious, research shows that individuals who collaborate with others during goal pursuit (e.g., setting goals, selecting strategies) improve their task performance significantly better than those who do not collaborate. Moreover, these same individuals also demonstrate greater self-efficacy from those who lack a participatory approach (Latham, Winters, & Locke, 1994). Interestingly, the value in a participatory approach is primarily cognitive rather than motivational. This is because the process predominately focuses on an exchange of ideas (Locke, Alavi, & Wagner, 1997). Given these results, it is likely that this participatory approach of having the mentors work with their mentees

throughout the goal pursuit process is one explanation for the improvements observed in self-regulation.

It is important to emphasize that the "participatory approach" in this study is argued to be effective largely because the mentors used scaffolding techniques. Scaffolding is a reciprocal process between a more knowledgeable other and the learner (Meyer, 1993). Again, the idea behind using a scaffold is to progressively instill greater autonomy in order for the participant to self-direct the experience. This does not mean that adults should simply let youth direct everything on their own without adult support and guidance (Camino, 2005). Such an approach fails to provide youth the resources and cognitive skills to learn how to improve their performance. Rather, having the mentors work with their mentees by scaffolding (role modeling, practicing, coaching, and so forth) was centrally tied to the participants success in achieving their goals and thus, learning how to self-regulate.

For recreation professionals, the findings suggest that adult staff-youth interactions can be structured in ways that foster self-regulatory competence in youth. Based on this study, this can occur in two ways. First, providing youth opportunities to exert choice and authentic participation in selecting goals that are of interest to them is critical. However, youth need guidance to select goals that provide an optimal challenge, otherwise if the goal is too easy or impossible to achieve, motivation may be lost and the desire to sustain self-regulatory efforts decreases (Schunk, 2001). Secondly, recreation staff ought to use scaffolding strategies as a way to elicit participant involvement throughout the mentoring process. Scaffolding provides a structure to frame goal pursuit that allows for developmentally appropriate progress.

Although the findings are promising, it warrants discussion on the tension between the value in intentional targeting outcomes such as self-regulation, and letting the recreation experience be sufficient in and of itself. Although the program was effective in achieving the targeted outcomes, other aspects of the program were changed or lost to accommodate the mentoring sessions and may have detracted from the overall recreation experience. For example, youth were at times pulled from activity periods to attend a mentoring session. Or, in other cases, mentors were asked to observe and evaluate participants' self-regulation, which may have been in conflict with meeting other programming responsibilities. In such instances, maintaining the recreation experience for its own sake seems to shift focus to simply serving as a tool to achieve a specified objective. As noted before, the comparison site showed improvements in self-regulation without the formal mentoring and evaluation of participants' self-regulated behaviors. Such outcomes attest to some of the integral elements of the recreation experience that promote self-regulation (see Chapter 2) that do not necessitate more targeted programming. This is not to suggest that one site necessarily had a better recreational experience than the other, or that intentional programming for self-regulation detracts from the recreation experience. It does, however, raise important questions as to what parts of a program are enhanced and those that may be lost in the process when targeting specific outcomes.

In sum, the findings presented in this chapter corroborate other research on the value of mentoring and provide implications for recreation professionals on offering formalized mentoring to youth. First, summer recreation programs appear well suited and positioned to train staff as mentors. This chapter indicates the value of providing

formal opportunities for staff to engage in one-on-one mentoring with youth as a way to improve self-regulation. However, providing formal opportunities for staff to mentor requires thoughtful planning to maximize program effectiveness. Second, the SRMP was an intentionally designed program that integrated theories of adult-youth interactions and the development of self-regulation. As noted earlier, the results of the program design were effective as evidenced by the difference in self-regulation scores between the treatment and comparison sites. Third, recreation staff are critical. Staff should help youth learn how to set and pursue appropriate, yet challenging goals, as a way to develop greater self-regulatory competence. Recreation professionals should consider adopting scaffolding techniques as a mechanism to promote greater self-directedness and autonomy. The findings presented in this chapter indicate that such processes are key to building adult-youth interactions that support self-regulation.

Limitations

The research in this chapter had several limitations, which may have impacted the results. The limitations within this chapter include issues related to staff expectations and ratings, cultural differences between sites and participants, inconsistency in mentors' use of scaffolding strategies, a small sample size, and the use of a single measure of self-regulation. In addition, the degree of positive change in the treatment group is smaller than anticipated, warranting future investigation to improve program impacts.

All of the program staff from both the treatment and comparison sites attended an orientation describing the purpose of the study and their respective roles in the research process. Consequently, staff expectations may have influenced their interactions with

youth as well as their observational ratings on the MI. As noted earlier, one rater's scores were eliminated due to the fact that all of the observational scores exceeded the rest of the sample and exhibited a possible ceiling effect.

Although the treatment and comparison groups were identified as the most comparable, there were distinct differences between the sites that may have influenced the development of self-regulation. For example, each site displayed unique programmatic and cultural differences that may have influenced self-regulation. Field observations and interviews with both site coordinators revealed philosophical differences on program structure and disciplinary action. These differences, which are embedded in the sites' programming (e.g., incentives, reward systems, social interactions), likely influenced participant behavior and experience and may have affected (either positively or negatively) participants' self-regulation. Despite the fact that the agency's director considered the two sites most similar, more in-depth analysis of program delivery, social environment, and staff philosophy on youth development may help in matching more comparable programs.

In a similar manner, the youth in the sample may not have been the most comparable. As evidenced by the MI scores, the comparison site had higher scores to begin with than the treatment group. In general, the sociodemographic data that were collected suggested that the two sites were relatively similar. However, in exit interviews with the program coordinators, each consistently described the treatment site as having more "at risk" youth from more transient families. The significant improvements in self-regulation observed in the treatment group may be consistent with findings that show youth who experience greater environmental risks and/or have pre-existing behavioral

problems benefit the most from mentoring (Dubois et al., 2011). In other words, youth who show lower levels of healthy functioning have opportunity for greater gains when compared to youth who already reflect greater self-regulatory functioning. Future efforts should collect more in-depth sociodemographic data that may explain individual differences and help to statistically control for possible differences.

In addition, the use of the scaffolding strategies varied among mentors in ways that were difficult quantify. *In vivo* coaching, in particular, was a key component embedded in the scaffolding model that mentors were asked to use weekly. The idea of *in vivo* coaching or side-by-side coaching is designed for a coach to observe the program participant in action and to provide feedback in the moment. In related research, evidence suggests that *in vivo* coaching may be an important mechanism in which new behaviors are more efficiently adopted (Kohler, Crilley, Shearer, & Good, 1997). Yet, in the case of this study, mentors did not always have their mentees in activity sessions that would allow for *in vivo* coaching to take place. Thus, it was difficult to quantify the amount of *in vivo* coaching that occurred over the course of the summer. In the future, creating structured opportunities for mentors to observe and coach mentees may improve participant's self-regulation. Alternatively, having mentors select or pair activity periods with mentees may provide the necessary time to provide substantive coaching.

Lastly, due to attrition, the sample available for statistical analysis was relatively small. This limited the statistical power to detect changes in participants' self-regulation. Future studies should seek a larger sample. It is also important to point out that the MI was only one indicator of self-regulation that assesses specific subdomains of self-regulation. Thus, the more specific use of the MI as the sole indicator of self-regulation in

this study is limited. The MI primarily assesses cognitive management and does not capture emotional or behavioral components of self-regulation, limiting an understanding of how mentoring may impact other domains of self-regulation. In the future, using multiple indicators or including the Behavioral Regulation Index of the BRIEF-T may provide a broader perspective on the role that mentoring plays on different domains of self-regulation.

Directions for Future Research

Based on the findings in this chapter, additional research on mentoring to promote self-regulation in youth recreation programs appears warranted. A number of questions pertaining to context, dosage, mentor/mentee characteristics, delivery, and social influence are important areas for future research. Although the mentoring literature has made significant improvements to establish theory-driven research to inform practice, much work is needed to empirically test mentoring processes to outcomes. Specifically, advancements in the mentoring research should seek to address (a) theories of self-regulation to mentoring, (b) the role of social influence on developing self-regulation (c) mentoring as a part of a larger developmental systems schema, and (d) the need to centralize research findings.

In addition to the social influence of mentors, active management of social norms and influence of the peer group should be addressed. Research shows that peers and salient others have a significant impact upon one's self-regulation efforts (Fitzsimons & Finkel, 2010). For instance, peer dynamics are a source that can build or deplete self-regulatory capital. When one expects warmth and a sense of belonging to a group, self-

regulatory resources are strengthened. The opposite also holds true. That is, when an individual expects a lack of warmth and affiliation, self-regulatory resources are depleted (Finkel et al., 2006). The social environment influences how and why youth set goals, and their beliefs and expectations about being able to achieve goals. In turn, these relationships influence the norms and attitudes young people develop regarding the aspirations they have, and may contribute to either promoting self-regulation or detracting them from such efforts (Zimmerman, 2000).

Given the emphasis on relationships, positive peer interactions, community building, and the development of positive group dynamics in recreation programs, further research is needed to understand how such interactions influence youth's ability to effectively self-regulate. In discussions with staff at both sites, each described a different social environment (i.e., strong community vs. transient community). To this end, different programmatic structures were in place that may have affected site-specific expectations for social interactions between participants. As such, it would not be surprising if such interactions played a role in how the participants (at both sites) self-regulated. Future research should then address how different social environments might support/detract from developing self-regulatory competence in youth.

Due to the widespread appeal to make mentoring programs more accessible to youth, future research should look to test mentoring within a systems framework. Research over the last 20 years shows that even with improvements in mentoring programs, they typically yield small to moderate effect sizes (Dubois et al., 2011). This is not to negate their effectiveness, on the contrary; rather, this highlights that a multitude of other factors will impact a youth's development. Identifying how mentoring programs are

tied to a larger developmental schema is an important step to explain the multiplicity of youths' experiences and their combined impact on healthy functioning (e.g., Masten & Cicchetti, 2010). For instance, looking at how mentoring may link to other developmental inputs, such as family, school, and community settings, may help to identify the transactions, coactions, and interactions of these various inputs and their effect on developmental trajectories.

Finally, and not unlike other areas of research, the mentoring literature is somewhat fragmented and studied across multiple disciplines, limiting a comprehensive understanding of the state of knowledge (Dubois et al., 2011). While this chapter sought to take an interdisciplinary approach, the findings are limited in their generalizability and are likely missing important pieces of research that could have informed this study. Future investigations should seek to more systematically incorporate other areas of research to understand the role that adult-youth relationships play in promoting healthy development in youth. The role of self-regulation, as well as adult-youth relationships, are important topics in youth development that are discussed and tested in similar ways, using comparable concepts, with little apparent awareness or knowledge of other disciplines doing similar work. Future efforts should synthesize and synergize research findings and make access to these findings more centralized to make greater progress in our knowledge of these important topics.

Conclusion

Further understanding youth participants' responses to mentoring can assist practitioners in designing and facilitating experiences in ways that best target desired

outcomes. Targeting self-regulatory skills not only maximizes the mentoring experience and outcome achievement, but also serves to encourage healthy developmental trajectories. The results in this chapter suggest that formal and targeted youth mentoring provide a vehicle that can support youths' ability to self-regulate, specifically when it comes to planning and organizational skills. This powerful relational mechanism leads to implications for intentional program design and the role of adult-youth interactions in supporting development. It also leads to some implications on the various ecological structures that affect youth development. As, Johnson, Sudhinaraset, and Blum (2010) argue:

> Understanding developmental processes, and the situational and contextual factors that shape them, is key to identifying leverage points to promote adolescent health. Furthermore, building greater sociocultural understanding of youth development is integral to building political will on behalf of youth....This political will is critical to enacting and fully implementing developmentally appropriate policies and programs that can scaffold adolescent vulnerabilities while still promoting the autonomy needed for exploration and development. (p. 13)

It is important to acknowledge that self-regulation is a mechanism functioning at the level of the individual. As such, much of the onus for change, adaptation, and self-regulation lies in the individual. That said, it is critical to view youth through more dynamic models of development that move beyond putting them on developmentally deterministic pathways. For recreation professionals, this largely means that there is a need to recognize the importance of designing experiences and structures that allow for more self-directed experiences as participants pursue personal goals. One such way to meet this need is through mentoring, as it allows for important adult-youth relationships to develop and the opportunity to identify a participant's goals and needs. Furthermore, it allows the adult to guide and scaffold experiences that are more youth-directed, and thus provide the

opportunity for youth to drive their own development. The findings presented in this chapter provide some key findings that offer leverage points from which recreation professionals can better position programs to further communicate the important role mentoring can have in promoting healthy youth development.

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CHAPTER 4

EVALUATING PROGRAM IMPLEMENTATION IN YOUTH RECREATION PROGRAMS: MOVING BEYOND OUTCOMES

Introduction

"What makes our program effective?" or "Where and how can our program improve?" are common questions that recreation professionals are increasingly asking. Yet many of the tools that recreation providers have to assess their programs are limited in scope and unable to answer these questions. Program evaluations conducted within recreation agencies have largely focused on determining outcome achievement and have neglected assessing implementation or the factors that drive outcome achievement. Although demonstrating outcome achievement is important, there is a need to move beyond simply knowing whether outcomes were achieved or not. Developing tools that allow practitioners to explain *why* a program was effective or ineffective provides a more holistic evaluation perspective and offers insight into its implementation.

Not surprisingly, how a program is implemented influences its degree of effectiveness (e.g., Dusenbury, Brannigan, Falco, & Hansen, 2003). This is particularly relevant in recreation programs, which are dependent on the interaction of program activities, staff, and participant characteristics to reach program objectives. Further, many

youth recreation programs are incorporating prevention interventions, academic support, and more formalized curricula into their programs that make maintaining the implementation standards, as defined by the developer, challenging. When disseminating extant curriculum into a new program structure, setting, and/or culture that is different from the original design, intended outcomes are likely affected. This is often because the curriculum has to change to maintain congruency between program and context (Stanton Harris, Cottrell, Li, Gibson, Guo, et al., 2006).

Despite interest in implementation evaluation, research has largely focused on examining a single component of implementation, as opposed to the multiple factors that affect a program's effectiveness (Berkel, Mauricio, Schoenfelder, & Sandler, 2011). Moreover, the emphasis on implementation factors has primarily focused on evaluating program fidelity, or the degree to which a program is delivered as it was intended (Hill, Maucione, & Hood, 2007). Recently, some researchers have suggested that emphasizing program fidelity as the primary indicator of program efficacy fails to recognize other important implementation processes occurring (e.g., Shen, Yang, Cao, & Warfield, 2008). Moreover, no study has ever reported 100% fidelity, suggesting that fidelity alone is both an incomplete and unrealistic explanation (Durlak & DuPre, 2008).

In addition to program fidelity, quality of implementation (i.e., the way a program is delivered), facilitator adaptations (i.e., modifications made to the program), and participant responsiveness (i.e., engagement) are three other implementation factors known to affect program effectiveness (Berkel et al., 2011). Examining each of these implementation factors provides a more holistic approach to guide evaluation practices. Furthermore, for programmers who are in the early stages of program development,

assessing implementation also provides information that can be used to modify and refine the program (Shen et al., 2008). Thus, having the tools to assess implementation factors is of primary concern for practitioners, researchers, and policy makers alike.

Therefore, the purpose of this chapter is threefold: a) to introduce a broader approach to evaluation; b) to provide examples of implementation evaluation; and c) to discuss how such an approach might be used in recreation youth programs. I draw on the implementation of a youth mentoring program to illustrate the methods and measurement used to assess program fidelity, quality, adaptations, and participant responsiveness.

The remainder of the chapter is organized as follows. First, as this chapter is largely based on Berkel and colleagues' (2011) model of implementation evaluation, a brief overview of their theoretical model will be presented. Second, the development of the mentoring program and its objectives are described to provide a reference point, as this program is referred to throughout the chapter. Third, program fidelity, quality, adaptations, and participant responsiveness will each be reviewed, followed by an example of the methods and measurements I utilized to evaluate the effectiveness of the mentoring program. Finally, implications for evaluating implementation factors within recreation programs are discussed.

Program Implementation Evaluation

To understand a program's effectiveness, it is critical to look to the implementation factors that drive outcome achievement. Much of the research on implementation evaluation stems from the medical, prevention sciences, and education literature with little attention paid to how these implementation factors might be applied

and measured within a recreation context. While conceptualizations of implementation are abundant, Berkel and colleagues' model provides a synergistic model (see Figure 4.1) that aligns well with examining program implementation within a recreation context. As seen in the model, implementation is positioned as a higher order construct that is comprised of four factors. Three of these elements, fidelity, quality, and adaptations, are directly tied to the delivery of the program. Each of these factors is largely influenced by facilitator action. The fourth factor, participant responsiveness (i.e., a participant's level of engagement in the program), is dependent upon the participant and mediates quality and adaptation and moderates the effects of fidelity.

Berkel and colleagues' (2011) model provides a useful way to explain and evaluate how implementation processes impact outcomes. Traditional models of evaluation typically assess only one implementation factor at a time, whereas this model illustrates the interplay between multiple implementation factors. An important distinction this model makes is between implementer behaviors (fidelity, quality, and adaptations) and participant behaviors (participant responsiveness) and their respective roles in impacting program outcomes. As this model suggests, participant responsiveness moderates the effects of fidelity and mediates quality and adaptations. In other words, no matter how well a program is designed and delivered, participants' level of engagement is likely to affect whether outcomes are achieved. For example, research shows that programs high in fidelity, but low in engagement (i.e., participant responsiveness) are less likely to achieve outcomes (Hansen, Graham, Wolkenstein, & Rohrbach, 1991). Similarly, the literature suggests that quality is essential to promoting high levels of engagement. Intuitively this makes sense.

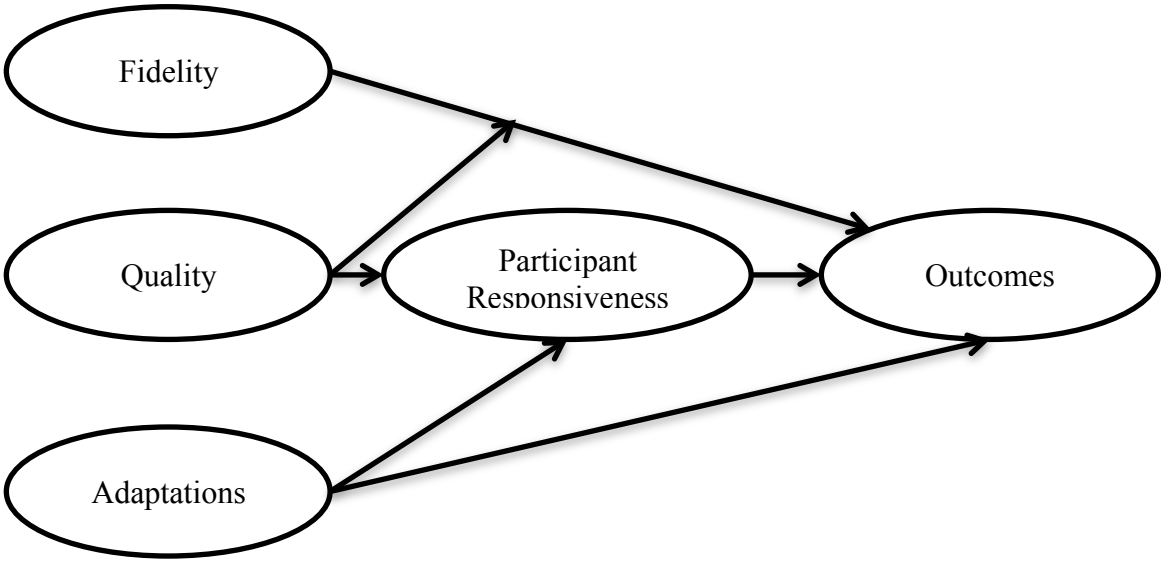

Figure 4.1. An integrated theoretical model of program implementation (adapted from Berkel et al., 2011).

Consider an implementer who poorly delivers a program or curriculum. It would not be surprising for poor facilitation to result in participant disengagement. Alternatively, the implementer who uses strategies designed to elicit participation is more likely to result in increased engagement levels. Finally, a growing body of literature points to the critical role that adaptations play (both directly and indirectly) to participant responsiveness and program outcome achievement (e.g., Lee, Altschul, & Mowbray, 2008; Shen et al., 2008). Berkel and colleagues argue that when programs are consistent with participants' needs, experiences, and cultural context, programs are more likely to engage participants. In fact, evidence indicates that when programs lack congruency with the cultural context, programs often fail to engage participants (e.g., Kumpfer et al. 2002).

Taken together, program fidelity, quality, adaptations, and participant responsiveness are four factors that affect the relationship between the intended program

design and the way it is actually experienced by the participant. Program fidelity, quality, and facilitator adaptation work simultaneously to produce program outcomes, and participant responsiveness serves as an important factor in this process. The interaction of these processes is likely dependent on multiple individual, social, and contextual factors that may centralize the role of adaptation. It is well recognized that an individual program reflects a unique culture, which necessitates adaptations in order to maintain effectiveness (e.g., Castro, Barrera, & Martinez, 2004). Failing to document adaptations, however, limits a program's ability to generalize findings and identify those modifications that facilitators make, which may promote or detract from a program's efficacy (Backer, 2002; Boruch & Gomez 1977; Castro et al. 2004). Given the dynamic nature of recreation programs, this may be an especially important factor to assess.

Recreation and Program Implementation Evaluation

Although substantial progress has been made to document the beneficial youth outcomes of recreation programs (e.g., Caldwell & Witt, 2011), few studies evaluate the implementation factors that drive the achievement of those outcomes. Recreation programs rarely reflect a formalized and structured adherence to a curriculum, and those that do still operate within a dynamic environment that may limit a high degree of implementation fidelity. For example, it is widely known that adult-youth relationships are one of the central facets of quality youth programs that directly impact outcome achievement (e.g., Dubois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). However, each adult-youth relationship will manifest differently and may not reflect a strict adherence (fidelity) to a particular curriculum or program protocol. Moreover, recreation

programs typically employ staff trained in broad areas of expertise rather than specific program protocol and thereby introduce variability in how a program is delivered (i.e., quality, adaptations, participant responsiveness). Thus, a strict focus on program fidelity is likely to overlook the nuances of the program context and the ways in which staff use their expertise to meet individual participants' needs. Simply identifying how much a staff follows a scripted curriculum does not address *how well* the staff implemented the curriculum (quality), or the nuances (i.e., adaptations) that are key to effective programming and that are bound to change and vary across multiple participant interactions. Participant factors, such as responsiveness, are also known to influence effective adult-youth relationships in programs (Nakkula & Harris, 2005). For recreation professionals, Berkel and colleagues' (2011) model may provide a framework to apply within a more dynamic context to guide evaluation practices.

This chapter is an effort to illustrate through applied examples the process of measuring fidelity, quality, adaptation, and participant responsiveness within a recreation context. The development of measures assessing implementation factors may assist recreation program developers by providing critical insight into a program's implementation effectiveness and outcome achievement. Effective implementation evaluation begins with understanding a program's design. As such, an overview of the mentoring program is presented, along with a program model (see Table 4.1) that highlights the primary objectives of the program and how implementation efficacy was going to be assessed.

Table 4.1 Mentoring program and implementation model

Program: Resources	**Mentoring Program**	**Outputs**	**Proximal Outcomes**	**Distal Outcomes**
Program Activities Urban Art Film Making Bike Repair Chess Cultural Cooking Dance Computer Class Skateboarding Swimming Field Trips Academic Tutoring Community Service Outdoor Adventure Recreation Staff 3 Mentors Facilities Youth Characteristics 29 participants males(21) / females(8) Ages: 9-14 years old	Content (Fidelity) Week 1: Relationship Building Week 2: Goal Setting, 1 Week 3: Goal Setting, 2 Week 4: Performance,1 Week 5: Performance, 2 Week 6: Monitor/Eval, 1 Week 7: Monitor/Eval, 2 Week 8: Wrap-Up Delivery (Quality) Scaffolding Strategies Ongoing Assessment Mentors complete structured journals for each session (fidelity, quality, adaptations, participant responsiveness) Researchers conduct bi-weekly meetings with mentors	Mentoring Program 8-weeks of programming camp, 8:30-5:30, M-F (360 hours of contact time for entire session) 1:1 intervention ~15 minutes. 1 session/week for 8 weeks = 2 hours Ongoing in vivo (side-by-side) coaching throughout the week. Assessment 232 Structured journals 4 bi-weekly staff/mentor meetings 3 exit interviews with mentors 11 Interviews with participants	Youth Outcomes Increased peer and staff bonding Active engagement Increased goal setting, planning, performance, and monitoring behaviors Adaptive transfer and use of regulatory skills across situations and changing conditions Assessment Outcomes Fidelity percentage Quality (scaffolding strategy frequency) Adaptation (description and rationale for making adaptations) Participant Responsiveness Scores	Youth Outcomes Improved developmental outcomes (e.g., executive functioning) Decrease risk behaviors Assessment Outcomes Improved Program implementation efficacy

An Applied Example

In 2011, I developed a curriculum that was premised on the belief that recreation settings are a viable context to support and promote self-regulation in youth (Morgan, 2011). Theories of self-regulation posit that adult-youth relationships are important mechanisms that can promote self-regulation. Thus, the curriculum utilizes recreation staff to act as mentors to youth participants. These mentors scaffold opportunities for youth to set goals, apply strategies to guide behaviors, and monitor their efforts. Context also played a significant role in designing the curriculum to ensure it was suitable to agency goals, staff skills, programming, and participant's developmental needs. While many self-regulation interventions are implemented in academic, clinical, or youth prevention programs, and directed by teachers or clinicians, recreation programs and staff reflect distinctly different features and characteristics. I previously argued (see Chapter 2) that the adult-youth relationships in recreation programs serve as an important mechanism to support self-regulation. Thus, the curricular focus of this program was on establishing mentoring relationships to foster self-regulation. Prior to implementation, a program model was developed to outline the mentoring program's objectives (i.e., improve self-regulation) to outcomes (see Table 4.1). The program was an 8-week summer day program for youth ages 9-14. The mentoring program included 8 one-on-one sessions where mentors met individually with program participants for a 15-minute check-in.

Each session was hierarchically arranged to build on skills associated with four core elements: relationship building, goal setting, strategy use, and monitoring efforts. Mentors guided participant learning and self-regulation development by using a

scaffolding model shown to support self-regulation (e.g., Wyman et al., 2010). The scaffolding approach included the following eight steps: (a) direct instruction, (b) imitation of an adult model, (c) role play, (d) purposeful practice, (e) observation, (f) 'coaching' *in vivo*, (g) reinforcement of learning, and (h) self-directed skill use. Also identified in the program model are the core elements of how the mentoring program's implementation factors (fidelity, quality, adaptations, and participant responsiveness) were assessed.

Three staff who worked in the summer program were selected by their supervisor to serve as mentors. The mentors completed a 6-hour training session over 3 days that introduced the concept of self-regulation and contextualized it to the mentoring process. Mentors engaged in various experiential activities to more fully understand self-regulation in youth and how it is expressed through behavior, emotion, cognition, and motivation throughout a task. The last part of the training focused on the scaffolding component, where mentors engaged in simulations to practice providing participants with verbal instruction, modeling self regulation strategy use, role playing, purposeful skill practice, *in vivo* coaching, and offering reinforcement on positive behaviors. Mentors then worked through the mentoring curriculum to practice going through the sessions. The researcher provided feedback throughout the training to ensure a higher degree of understanding and fidelity in implementation.

As hypothesized**,** the results of the mentoring program showed positive improvements in self-regulation for youth who received the mentoring in comparison to youth who were at a different, yet comparable program site, and who did not receive mentoring (see Chapter 3 for a full report). Although outcome evaluation was done (i.e.,

self-regulation scores) and program efficacy was demonstrated, the outcomes were not as large as expected. These findings suggest that further program development is warranted. Left simply with these results, however, it would be difficult to identify why the program was effective or what aspects were ineffective and how we might improve the program. The following sections outline how each implementation factor is defined and measured in the literature, followed by how we operationalized and measured those factors in the mentoring study.

Defining and Measuring Program Fidelity

Fidelity refers to the relationship between a program (i.e., curriculum) design and the degree to which it reflects the design in its delivery. Terms such as integrity, adherence, and compliance are used interchangeably with fidelity (Berkel et al., 2011). All of these terms seek to capture the notion that a program should reflect what its designer intended. Fidelity has long been considered the crux of whether a program achieves it maximum effectiveness or not. For instance, if one program facilitator adheres to 90% of a program protocol, whereas another facilitator only demonstrate 40% compliance, it is assumed that the variability in compliance would impact a program's effectiveness. In other words, the implementer demonstrating a high level of fidelity (i.e., 90%) would theoretically contribute to greater program effectiveness compared to the implementer complying at 40%. Contradicting these common assumptions, James and colleagues (2001) found that high fidelity actually results in lower levels of program efficacy. Yet it is difficult to determine how much adherence is necessary to achieve optimal results as so few studies report program fidelity and even fewer link fidelity to

outcomes (Dane & Schneider, 1998). However, some research suggests that programs achieving 60% fidelity result in positive outcomes (Durlak & DuPre, 2008). Typically though, programs do not report reaching levels of fidelity higher than 80%. Thus, there is some debate as to whether measures of program fidelity are a useful indicator of program effectiveness. Nevertheless, there continues to be a strong emphasis on program effectiveness being tied to fidelity and that any deviance will likely result in its ineffectiveness (Calsyn, Tornatzki, & Dittmar, 1997; Szulanski & Winter, 2002)

Problematic to these strict notions of fidelity is the assumption that program content is explicit and provides a clear metric for comparison (e.g., a curriculum training manual). Recreation programs using extant curriculum, for example, may benefit from fidelity assessments given the availability of an established and documented program structure (Shen, et al., 2008). For non-evidenced-based programs that have no prior reference point, fidelity is somewhat relative as the design of the program is flexible and will likely undergo modification. Nowhere is this more evident than in recreation youth programs. Often, these programs are less structured, dynamic, and consistently changing based on facilitator and participant preferences. Thus, adhering to a strict assessment of fidelity may not be as useful to understand program implementation effects. That said, evidence continues to mount indicating that specific elements within recreation programs are necessary to achieve developmental outcomes. As such, a need exists for measurements of fidelity that capture these more fluid aspects of program implementation that also account for adaptations, quality, and participant responsiveness.

Conceptually, notions of fidelity are largely consistent; operationalizations of fidelity, however, are numerous and measures vary widely. Some of the most common

ways that fidelity is assessed are based on the amount of content covered (Basen-Engquist et al., 1994; Botvin, Dusenbury, Baker, James-Ortiz, & Kerner, 1989) or the amount of time dedicated to a particular session, also known as dosage (e.g., Durlak & Dupre, 2008; Pentz et al., 1990). The ways in which these data typically are reported include: self-report forms (i.e., checklist or log), observational forms, or participant surveys (for a review see Dusenbury et al., 2003). Facilitator self-report forms typically have the implementer log what percentage of content was covered. Another common self-report method is the use of a self-evaluation form for facilitators to rate the completeness of coverage of a particular topic or activity (e.g., Basen-Engquist et al.; Dent et al., 1998). Observational forms are another standard approach to assessing fidelity and typically require an observer to indicate how closely the facilitator delivered the curriculum as detailed (Botvin et al., 1990). Finally, a participant survey might ask the participant to identify what aspects of the content were covered (Basen-Engquist et al.).

Self-report forms are most frequently used as they are the most cost-effective, easiest to administer, and are a relatively efficient way to collect data. Nevertheless, self-report forms have shown that when compared to observational ratings, implementers are more positively biased in their performance (Miller & Mount, 2001). Observational forms, on the other hand, provide a stronger assessment of implementer fidelity. These more 'objective' assessments are more likely to be linked to outcomes and have greater assessment accuracy (e.g., Hansen et al., 1991). Observational data are, however, more costly than self-report data, and are often based on a single observation that may not be entirely representative of the implementation process (Waltz, Addis, Koerner, &

Jacobson, 1993). Because methods of implementer fidelity within recreation programs are few, an example of the development of a self-report form designed to assess implementation fidelity for the mentoring program is presented.

Implementation Fidelity Illustrated

In the case of the mentoring program, it was important to focus on fidelity as it pertained to the amount of content covered. By focusing on the content, the evaluation assessed what aspects of the curriculum were covered. This assessment provided the means to follow up with the mentors and gain their perspectives on strong and weak areas within the curriculum. In turn, this provided the basis to go back to the literature and assess any adaptations of programs targeting self-regulation (e.g., Cleary, Platten, & Nelson, 2008; Wyman et al., 2010). More specifically, assessing fidelity allowed me to evaluate the implementation of a structured mentoring program to a recreation context.

Drawing on Cross and West's (2011) detailed outline for examining mentor adherence, a similar protocol was developed. While Cross and West used observers to rate their implementers, a structured mentor journal was created for each of the eight sessions (see Morgan, 2011). These structured journals had a list of core content areas that were supposed to be covered during each session. Mentors were asked to indicate in the journal the curricular items they completed for each session, for each participant. The journal allowed mentors to conduct the sessions without the interruption of an outside observer. A high degree of internal consistency between items was not expected, because implementation fidelity in one session is not necessarily predictive of fidelity in another session (Cross & West, 2011). A total score from the checklist was generated and

transformed into a percentage. This percentage provided a measure of fidelity, as defined by how closely mentors adhered to covering the curriculum.

The average percentage of program fidelity was 98% between all three mentors across all eight sessions. Fidelity was relatively high with only slight differences between mentors. As noted previously, rarely do programs achieve such a high level of fidelity. The high degree of fidelity observed in this program may be due to the scale of the program, as it was relatively small with only three mentors. It is likely that if more staff were involved in the implementation of the program, that greater variability would have been observed. In addition, the curriculum was designed more as a framework with "core components" and less of an explicit protocol to be followed exactly. This intentional flexibility was to ensure that each mentor-mentee relationship could progress based on the needs of the individual participant. This inherent flexibility may be different from other youth recreation programs that have stricter fidelity criteria, making a higher level of fidelity difficult to achieve.

To further analyze the relationship between fidelity and program outcomes, correlations were generated between fidelity scores and program outcomes (i.e., self-regulation scores). There was one significant correlation (.46, $p < .05$) between one of the indicators of self-regulation that increased during the intervention and fidelity. This may suggest that some aspect of adherence to the curriculum was particularly relevant for at least one aspect of self-regulation.

Collectively, the use of the journal provided data for multiple methods of analysis. The data in these examples illustrate that some of the positive outcomes observed (i.e., improved self-regulation scores) may be attributable to fidelity; however, other data

suggest that this relationship is somewhat small. Thus, the high degree of fidelity provides one measure of confidence by which to establish important curricular guidelines to improve self-regulation in youth. Yet, as evidenced by some of the conflicting findings, the fidelity scores alone are a limiting assessment. Recognizing the strengths and weaknesses in collecting fidelity data, recreation practitioners should then consider assessing other implementation factors that may affect program outcomes, such as quality, which is now discussed.

Defining and Measuring Quality

Quality is broadly defined as the *way* a program is delivered (Dusenbury et al., 2003). Such a broad definition has led to a variety of interpretations and conceptualizations of quality. In contrast to fidelity, which is primarily interested in knowing how compliant a facilitator is to a program, quality refers to how well a facilitator delivers the program. In other words, no matter how well a program is designed, the processes and methods of delivery are the crux of whether the program is effective. For instance, a staff person might follow a script and cover the content in the program; however, if the staff fails to communicate effectively, use strategies that engage participants, or encourage a safe and supportive environment, the program will likely result in less than ideal outcomes. Quality is thus an important element of implementation influencing program effectiveness and an essential factor to assess.

Recently, quality has become an important factor in understanding what makes youth programs effective. Substantial research has been directed to identifying the program mechanisms that support youth development as a way to benchmark essential

characteristics of quality programming. In the youth development literature, the most critical component driving effective youth recreation programs is relationships between adults and youth. In fact, one of the most significant predictors of program effectiveness is the interaction between staff and youth (Smith, Akiva, Blazevski, Pelle, & Devaney, 2008). These interactions are often seen as more important than the structural components (i.e., program design, staff qualifications, resources). As a result, assessing quality often emphasizes staff behaviors and the interactions among and between staff and youth (Smith, Devaney, Akiva, & Sugar, 2009).

What do quality interactions between adult staff and youth look like and how do you capture whether these interactions are effective? As evidenced by the earlier example, quality can encapsulate a range of behaviors (e.g., communicative skills, teaching strategies, rapport building) that a staff may utilize to deliver a program. One of the common ways quality has been operationalized entails assessing the degree of competence with which a staff delivers a program. This has primarily been assessed in clinical or educational settings where the use of specific clinical or teaching techniques is considered best practice (e.g., Abbott et al., 1998; Cross & West, 2011). In other studies, evaluating teacher-student interactions, interactive teaching methods, and student satisfaction are considered important facets of quality that gauge how well a program is being delivered (e.g., Hansen, 1996). Still others have argued that quality is reflected in teacher enthusiasm (Botvin et al., 1989) or the use of strategies that promote versus detract from implementation (Harachi et al., 1999). Thus, definitions of quality vary and are numerous. For the mentoring study, quality was operationalized as discrete behaviors (i.e., scaffolding strategies) theoretically linked to the content and our outcome (i.e., self-

regulation). The use of these strategies was an integral part of the program and evidence of their use would theoretically substantiate the study's premise (or not). Moreover, these scaffolding strategies are interactive, which is another important indicator of quality (Smith et al., 2008).

Just as there are a number of ways that quality can be defined, there are equally as many ways to measure quality. Quality is typically assessed through observational ratings. Abbott and colleagues (1998) utilized observers to indicate on a checklist the specific teaching strategies teachers utilized and to what extent those strategies were employed. On the other hand, Hansen et al. (1991) used both observation and self-report forms to assess on a 7-point likert scale how well the program was delivered. Aspects of quality included rating how effective the teaching methods were, the extent to which activity objectives were met, and the overall quality of the activity. Later, in another study, Hansen (1996) asked students to report on the quality of their teacher, as well as satisfaction with the program and interactions with their teachers. Although both observational and student reports of quality are valuable ways to assess quality, as noted previously, such sources of data demand greater resources from practitioners. This is particularly true when attempting to capture quality. Extensive observer training is required to ensure a high degree of interrater consistency in observational scoring. Furthermore, the frequency needed in observations to make generalizations beyond a single observation, or to detect meaningful patterns, place demands on resources in which practitioners are generally limited (Rowan, Jacob, & Correnti, 2009). As an alternative, the use of logs has gained attention in education as a method for teachers to track the use of teaching practices. Logs are an inexpensive and reliable method to collect detailed

information (Rowan et al.). Like other approaches, using a log requires specific program practices to be identified that are important to the program and researchers. The amount of information included in logs can provide substantial data useful for generalization. Logs, however, are limited in their ability to capture attitudes and behaviors, and may be influenced by response bias (i.e., reporting socially desired responses) (Rowan et al.). Nonetheless, logs have shown to be one method by which to collect valuable data on quality in an efficient, cost effective, and reliable manner. Thus, using logs to track strategy use may be an effective method for recreation professionals.

Quality Illustrated

Using the same structured mentoring journal described earlier, mentors were asked to identify the strategies used to deliver the program. Basing this evaluation approach on the use of logs to track teaching practices, mentors were asked to track the strategies they used for each mentoring session (Rowan et al., 2009). These strategies have previously been identified (Wyman et al., 2010) as important mechanisms that support regulatory behaviors in children. Furthermore, the theoretical premise of using these strategies is the core of interactions between the mentor and mentee and the basis for delivering the curriculum. Thus, assessing quality was linked to the use of scaffolding strategies (i.e., direct instruction, imitation of an adult model, role play, purposeful practice, 'coaching' *in vivo*, reinforcement of learning, and self-directed skill use).

Because the premise of the mentoring study was built around a scaffolding model, it was assumed that each mentor would vary in his or her use of strategies to tailor sessions to each mentee's individual needs. It was further assumed that because the

development of self-regulation is initiated by first observing and then emulating a more knowledgeable other until self-directed performance is possible, the use of more self-regulated strategies should increasingly become evident (e.g., Zimmerman, 2000). By asking mentors to track what strategies they used, I sought to gauge the use and frequency of specific scaffolding strategies (see Figure 4.2).

As Figure 4.2 shows, the mentors most frequently used the direct instruction and modeling strategies. In contrast, the strategies that were least frequently used were those strategies associated with more self-regulated behaviors. For example, having participants practice was a technique rarely used, indicating that mentees had little opportunity to practice new skills or strategy application, which was an important part of the curriculum. Observe, coach, and reinforcement, were other strategies that were rarely used. As part of the curriculum, mentors were asked to observe and coach their mentee's use of self-regulation strategies in a natural context (i.e., playing) in order to provide feedback on strategy application. Reinforcement, on the other hand, was a technique for mentors to encourage participants in their strategy application or offer up suggestions for alternative and more effective strategy use.

Yet, as Figure 4.2 shows, these strategies were some of the least frequently used strategies collectively and on an individual mentor basis. The results also demonstrate a fair amount of variability between mentors in each of the strategies. For example, for the modeling strategy, Mentors 1, 2, and 3 reported using it 69%, 81%, and 74%, respectively, over the course of 8 weeks. These findings provide one possible explanation for the small effect sizes reported in Chapter 3. In other words, it may be that had mentors.

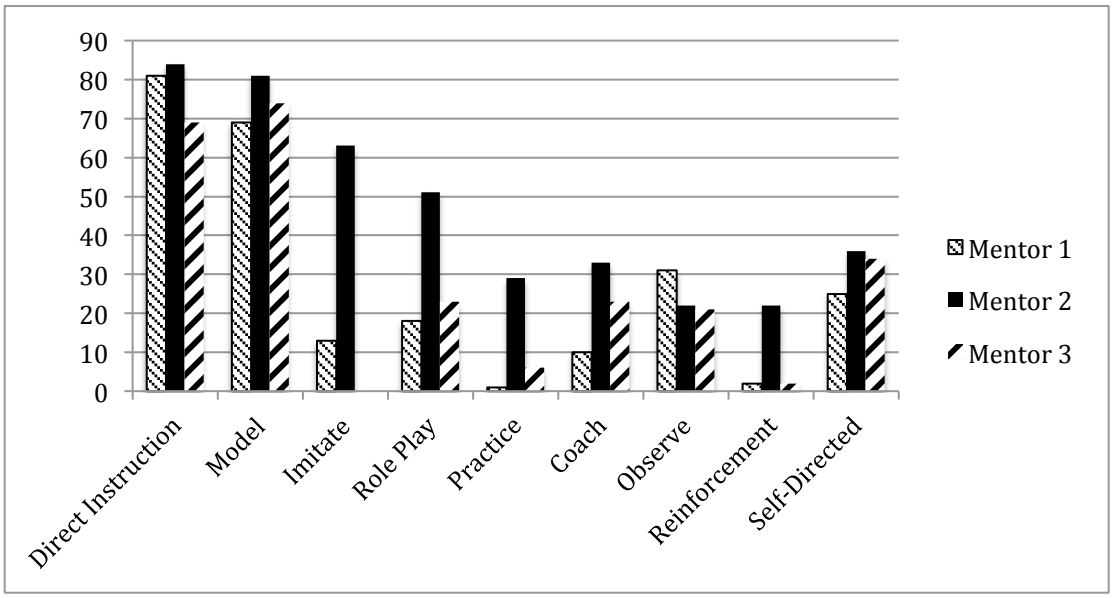

Figure 4.2. Frequency of teaching strategies mentors used throughout the 8-week program

employed more coaching (or reinforcement, observe, practice, etc.), greater improvements in self-regulation may have been evident

Further, correlational analyses showed that the role-play, observation, and self-direction strategies were all statistically significant and positively correlated to some of the outcomes. Conversely, reinforcement and observation were statistically significant and negatively correlated to some of the outcomes. The remaining strategies showed small and nonsignificant correlations. These findings suggest that some of the strategies were more positively and negatively linked to the outcomes than others. These types of analyses can be useful, to determine which elements of quality have the strongest relation to outcomes. However, these findings must be interpreted with caution as it is likely that the different strategies also represent varying styles among the mentors, making some mentors more effective than others.

Quality then is an important implementation factor to assess as it gives insight into how a program is being delivered. Although somewhat of a broad concept, which has led to several different approaches in measuring quality, the use of logs can be an efficient and valuable way for recreation practitioners to track the strategies used to convey a curriculum. As illustrated in the example presented, identifying elements of a program that constitute quality can assist practitioners to link how the staff were delivering the curriculum to the outcomes. This, in turn, can be a powerful assessment to integrate into staff evaluations, feedback, and trainings. Uniquely tied to how well a program is delivered is how a program employs adaptations.

Defining and Measuring Adaptations

There is no question as to whether adaptations to a program will occur and in fact it is unrealistic to assume otherwise. As Bauman, Stein, and Ireys (1991) pointed out,

> Implementing a program is like constructing a building. An architect draws upon general engineering principles (theory) to design a building that will serve the purposes for which it is designed. However, the specific building that results is strongly influenced by parameters of the building site, such as the lot size, the nature of the site's geological features, the composition of the soil, the incline of the surface, the stability and extremes of climate, zoning regulations, and cost of labor and materials. The architect must combine architectural principles with site parameters to design a specific building for a specific purpose on a specific site. ...This dynamic is mirrored in the rough-and-tumble world of the human services. Despite excellent plans and experience, ongoing redesign and adjustment may be necessary. (p. 634.)

The important question this statement highlights is not whether adaptation will occur, but how much adaptation is acceptable before the program is damaged or not at all what the designer intended (Hall & Hord, 2001). Adaptations refer to changes made by the facilitator to the program that extend beyond a program protocol or curriculum as

outlined in a manual (Berkel et al., 2011). Changes can include addition, modifications, or complete removal from the program and may have positive or negative outcomes (e.g., Dusenbury, Brannigan, Hansen, Walsh, & Falco, 2005). Some extend this definition and categorize adaptations as two distinct processes, modifications (an activity that goes beyond guidelines) and additions (something that was not part of the original program protocol; Blakely et al., 1987). Adaptation has also been called a "reinvention" of a program (Rogers, 1995).

Typically characterized as a deviation from program fidelity, and thus detracting from program effectiveness (e.g., Szulanski & Winter, 2002), others see adaptations as essential to program quality (e.g., Shen et al., 2008). Some have argued that adaptations should be considered additions to the program to move away from the common binary between fidelity and deviance. This shift in perspective provides opportunity for staff to tailor programs to meet important developmental and cultural needs for a particular community or population (e.g., Castro et al., 2010). Furthermore, as context and participant needs change, the need to adapt the program to remain relevant is crucial; otherwise, program effectiveness may decrease (Emshoff et al., 2003). Although context (site, facilities, culture) and participant characteristics (experience, developmental needs, abilities, etc.) are important elements that may result in program adaptations, staff characteristics are also an important factor to consider when assessing adaptations (e.g., St. Pierre & Kaltreider, 2004).

Staff members, for example, represent qualitatively different degrees of experience, interaction style, and belief in the program, each of which is known to affect participant outcomes (Dane & Schneider, 1998). These, in turn, can be linked to

positively and negatively valenced adaptations that influence how program fidelity is assessed (Dusenbury et al., 2005). Consider a staff member who perceives that a particular aspect of a curriculum is irrelevant or not useful, or perhaps feels uncomfortable delivering the curriculum as outlined and so makes some changes to accommodate those perceptions or feelings. Subsequently, the staff may change the curriculum to make it more relevant or deliver it in a way that the staff feels more competent and effective. In fact, such changes may indeed result in improved outcomes. On the other hand, the staff may simply choose not to see the relevancy or resist delivering the curriculum in a way that is different from what he or she is used to. This, in turn, may result in negative outcomes. Evidence suggests that a staff person's beliefs about program effectiveness predicts adherence to a program or whether adaptations occur (Ringwalt et al., 2003).

Regardless of the reason for making adaptations, youth programs are dynamic and necessitate training staff in wide areas of expertise. This requires knowing how to make effective adaptations to unpredictable circumstances, meet individual needs, and be aware of one's own strengths, weaknesses, and biases (Larson & Walker, 2010). Yet, very little research exists detailing the adaptations that are made within youth recreation programs and why staff perceive the adaptation as necessary (Hill et al., 2007). Because staff are the ones who initiate adaptations, assessing adaptations may help evaluate implementation effectiveness as well as inform program improvement processes. For programs that are still in a stage of development and lack evidence-based practices, assessing adaptations can be especially helpful to inform and refine program design and thereby improve program quality (Shen et al., 2008).

Few studies report adaptations and even fewer offer in-depth guidelines to assess adaptations and their impact. As a result, no standardized approach to measure adaptations exists. Furthermore, to my knowledge, no study has detailed a methodological approach to identify and categorize the types of adaptations made within youth recreation programs. Research in the prevention sciences, however, has made some efforts to address this deficit in the literature. The most common ways that adaptations have been assessed are through observational measures and by interviewing the implementer (e.g., Blakely, 1987; Hill et al., 2007; Kerr, Kent, & Lam, 1985). In one study, a group of researchers utilized observers to identify any deviations that an implementer made from a prescribed curriculum. The observers then scored the adaptation on a scale of -2 (negative adaptation) to +2 (positive adaptation) to identify whether the modifications enhanced or detracted from the program (Dusenbury et al., 2005). They found that implementers who made positive adaptations were more adherent to the curriculum than the implementers who made more negative adaptations. They also found that implementers who had more experience in delivering similar programs made more positive adaptations. In another study, McGraw et al. (1996) had observers use a structured form and note the extent to which implementers followed the program and whether modifications were made during the observed session. Their findings indicate that modifications were positively related to increased outcome achievement.

Somewhat differently, Hill and Maucione (2008) approached assessing adaptations made to a program by conducting interviews with program facilitators. The program they were assessing was a statewide program implemented by over 300 facilitators. They interviewed 41 facilitators to understand the types of adaptations and

the reasons for making those adaptations. They hypothesized that a minority of types of adaptations would account for the majority of adaptations. It was further hypothesized that the minority of types of reasons for adaptations would account for the majority of reasons for making adaptations. The results supported their hypotheses. In addition, the types of adaptations and reasons for making an adaptation provided specific feedback for that particular program with implications for staff training and support.

For example, the most frequently cited adaptation was related to time (i.e., running out of time and having to delete parts of the program) that could be addressed during staff training (e.g., time management, appropriate modification). While observational measures and interviews can be a valuable way to assess adaptations and their impact, self-reported measures of adaptations might provide a more consistent and comprehensive assessment of adaptations. This may especially be the case for programs in the efficacy trial phase, as it may help to identify adaptations that are important for program design and improvement purposes (Shen et al., 2008).

Adaptations Illustrated

As no standard method of measurement for adaptation exists, mentors were asked to include within their structured journal any modifications made to the curricular components of the mentoring sessions. Taken from the interview procedure of Hill et al. (2007), two open-ended questions were included in the journal and asked mentors to identify any adaptation made (e.g., "*Please comment on any changes made to the curriculum*") and the reasons for those adaptations (e.g., "*Please describe why the change was necessary"*). Having mentors track adaptations in their journals provided a way to

ascertain the types and reasons for adaptations that may not have been captured in single observations or interviews. Furthermore, by asking mentors to include any modifications made to the curriculum, I was able to assess congruency between program design and context to maximize effectiveness in future program development.

Responses were analyzed qualitatively. The data were analyzed for patterns and themes. These themes were compared to the data until a coding scheme had been constructed. Themes were enumerated using each mentor's entire response for a question as the unit of analysis. Data that provided no room for interpretation were coded as such. Coding each mentor's response in only one category allows for computation of percentages and comparison of relative magnitude.

As seen in Table 4.2, three primary themes emerged in the data regarding the types of adaptations that were made to the program. These themes described modifications made to the program related to dosage (i.e., the amount of time or number of sessions a mentor had with a mentee), delivery (i.e., using different strategies, such as verbally discussing ideas, as opposed to writing things down), or content of the program (i.e., instead of discussing pros/cons of strategies, identifying relevant situations in which to apply strategies)

A total of 63 adaptations were made to the program. The most frequently occurring adaptation was related to dosage (44.4 %), then delivery (42.8%), followed by changes to content (12.7%). Consistent with the high level of fidelity observed, modifications made to the content were the least cited adaptation made to the program. Again, the relative flexibility in the program curriculum may explain why so few adaptations were made to the content.

Table 4.2. Examples of curricular adaptations made by mentors

Code	Definition	Example	# of Adaptations
Dosage	Coded if facilitator mentioned combining all or parts of sessions	*"Condensed week 1 and week 2."*	28 (44.4%)
Delivery	Coded if facilitator mentioned changing how the curriculum was delivered	"*We verbally discussed pros and cons of each strategy, rather than making a written list."*	27 (42.8%)
Content	Coded if facilitator changed the content	*"Did not list pros and cons on roadmap…. We focused on role play with strategies."*	8 (12.7%)

In addition to describing any changes made to the program, mentors were also asked to discuss why they felt the adaptation was necessary. Table 4.3 provides an example of some of the common reasons mentors made an adaptation. While six different themes emerged, for illustrative purposes, only three are discussed. One of the most frequently cited reasons for making an adaptation was related to the participant missing a session 29.7%). Other common reasons for making an adaptation had to do with time (27%), such as having to cover too much material in a short amount of time. Another important theme was related to modifying the program because of mentee's developmental needs. For example, mentors commented that some of the mentees could not complete the writing exercises that were part of the curriculum and so verbally went through the exercise instead.

The adaptations described in the journals were further validated in follow-up interviews with the mentors at the end of the summer. In the interviews, the mentors were asked what the most common adaptation was that they made to the program.

Table 4.3. Examples of codes and reasons for adaptation reported by mentors.

Code	Definition	Example	# of Adaptations
Absent	Coded if mentor mentioned the reason for the adaptation was due to absenteeism	*"Child was absent for the first two weeks so I had to rush and get three weeks in."*	11 (29.7%)
Time	Coded if mentor mentioned that the reason for the adaptation was because of time	*"We had a verbal discussion about strategy pros and cons instead of writing them down. We did this to save time."*	10 (27%)
Developmental Needs	Coded if mentor mentioned that the reason for the adaptation was related to the participant's developmental needs	*"We verbally discussed pros and cons of her strategies, rather than making a list. We did this because she had a hard time thinking of strategies and was a slow writer."*	6 (16.2%)

Consistent with the findings from the structured journals, mentors described very similar adaptations. For example, 2 of the mentors commented on how the sessions became increasingly shorter as the weeks continued, or that participants would miss a session and they would have to condense the sessions. In another case, 1 of the mentors described changing how the program was delivered and commented, "I just really tried to make it [mentoring session] personal to each kid. So although the curriculum was a really good outline, it came down to knowing the kid. There were definitely times when there was just no way that the kid was going to respond to this." These statements were consistent with the results from the structured journal and the adaptations made to meet developmental needs or a participant's engagement level.

Collectively, these examples illustrate changes that took place and highlight areas for future program improvement. For instance, the data indicated that both time (e.g., consolidating sessions, not having enough time) and the participant's needs (e.g., level of literacy) were crucial factors tied to mentors making adaptations. A logical conclusion for program improvement might then include changing how the content is dispersed over the sessions. This may reduce the likelihood of mentors being faced with time constraints during their sessions. The fact that mentors frequently needed to consolidate sessions might indicate a need to create a more flexible scheduling system to allow for opportunities to reschedule a missed session with a participant.

Using both the structured journals and exit interviews provided valuable insight into a pattern of adaptations made to the mentoring program. In turn, this pattern provides a basis for making recommendations for future program development, such as changing how the curriculum is distributed over 8-weeks to improve the timing and duration of sessions. For practitioners, these data offer an example of how adaptation data can be collected and how they might be used to inform program delivery and improvement processes.

Defining and Measuring Participant Responsiveness

Unlike program fidelity, quality, and adaptation, which are largely dictated by facilitator action, the participant dictates participant responsiveness. Participant responsiveness has been described in terms of a participant's attendance, level of participation, enthusiasm, or how attentive a participant is during a program (Dane & Schneider, 1998; Durlak & Dupre, 2008). According to Berkel and colleagues' (2011)

theoretical model, participant responsiveness acts as a mediating factor linked directly to program outcomes. Thus, while quality and adaptation are important, responsiveness plays an important role in mediating their effects. A small body of research shows that participant responsiveness is impacted by quality of delivery and in turn, has an affect on outcomes. For example, Diamond, Liddle, Hogue, and Dakof (1999) found that when therapists used clinical skills that were client-centered (i.e., collaborative, rapport building), the client's level of engagement increased and outcome achievement improved. Berkel et al. (2011) theorized that adaptations also play an important role on a participant's level of engagement and as a result, affect outcomes. They argued that when implementers adapt or tailor a program to make it more culturally relevant or congruent to a participant's needs, it is likely to improve a participant's response to the program (i.e., greater attachment or buy-in). In fact, when programs are implemented in a community without any type of acknowledgement of culture, program impacts digress as they fail to engage community members (Kumpfer et al., 2002). Thus, a facilitator's use of adaptations may serve to increase engagement or attendance and thereby improve program effects (Berkel et al., 2011). Finally, participant responsiveness is suggested to moderate the effects of fidelity. The mixed findings linking fidelity to outcomes suggests that other factors come into play. In other words, some research has shown a positive correlation between fidelity and outcomes. Other studies, on the other hand, have shown no relationship (e.g., Resnicow et al. 1998; Spoth, Guyll, Trudeau, & Goldberg-Lillehoj, 2002). Berkel et al. (2011) suggest that one explanation for this variability is tied to a participant's level of engagement. They argue that programs high in fidelity but low in engagement or attendance are unlikely to achieve the desired outcome.

The centralized emphasis placed on participant responsiveness in the model of Berkel et al. is consistent with other literature that emphasizes engagement as an underlying precept necessary to achieve developmental outcomes in youth programs (Walker, Marczak, Blyth, & Borden, 2005). Thus, even though a staff may implement a program well, it is ultimately how the youth responds that will directly impact the effectiveness of the program. The longer youth are engaged in a program, the probability of optimizing developmental outcome achievement increases (Walker et al.). Conversely, if youth are not engaged, they are less likely to achieve developmental outcomes from recreation experiences (Caldwell & Witt, 2011). For recreation professionals, engagement is a central feature to providing developmentally enriching opportunities for youth. Evaluating whether youth are engaged is one way to ensure that the program is meeting the participant's needs and interests. It also provides one indicator as to whether youth are achieving the prescribed outcomes. Thus, as part of the evaluation process, recreation professionals should assess participant responsiveness.

There are a number of ways to assess participant responsiveness. Traditional measures of participant responsiveness include tracking number of sessions attended, satisfaction, and active involvement (Berkel et al., 2011). Number of sessions attended is the measure most often associated with strong program effects (e.g., Blake, Simkin, Ledsky, Perkins et al., 2001). It is important to make a distinction between attendance and dosage. In the literature, dosage is often used synonymously with attendance; however, this leads to a confound in measurement, as they typically operate on two different units of analysis. One is occurring at the participant level (attendance) and the other at the program level (dosage). For the purposes of this chapter, dosage refers to the

amount of sessions prescribed by the program, whereas attendance refers to the amount of sessions attended by the participant.

Measures of active engagement and program satisfaction have also been tied to outcomes (Blake et al., 2001). Harachi et al. (1991) used observational forms to assess youth's level of involvement in an academic classroom. Student involvement was operationalized as engagement with outside observers rating how engaged students were in a learning task. Hansen and colleagues (1991; 1996) also measured responsiveness as the level of involvement expressed by a student in the classroom. In this same study, participants were asked at the end of the program to rate their participation and whether they shared information with others (Hansen, 1996). Others have assessed engagement through both observer ratings and youth's self-report. In one study, observers were asked to rate on a perceived student acceptance index how interested the youth seemed to be and how much the students appeared to enjoy the instructor (Rohrbach, Dent, Skara, Sun, & Sussman, 2007). The youth self-report form was parallel to the items on the observational form and was completed at the end of the program and asked youth to rate how acceptable the program was. Acceptance was rated on nine positive objectives (e.g., enjoyable, interesting). Students also rated how effective the implementer was in eliciting participation.

In sum, measures of participant responsiveness are widely varied and include the use of observers, implementers, and participant ratings of responsiveness. Responsiveness has been operationalized as attendance, engagement, acceptance, enthusiasm, and involvement. Recognizing that participant responsiveness plays a critical

role in achieving outcomes, it may serve as an especially useful measure when assessing program implementation in youth recreation programs.

Participant Responsiveness Illustrated

Basing participant responsiveness off of Baydar, Reid, and Webster-Stratton's (2003) approach to measuring engagement, participant responsiveness was assessed on three factors: attendance, engagement, satisfaction. Attendance provides a general indicator of whether program outcomes can be attributed to whether youth actually received the program. Engagement, on the other hand, offers an indicator from the mentor's perspective on how involved the mentee was during the session. To this end, mentors were asked to record the number of sessions a participant attended, as evidenced by the number of journal forms completed by the mentor. Engagement was assessed on a likert scale with two items tied to engagement. Satisfaction was assessed through follow-up interviews with program participants at the end of the program.

Each completed journal was used to assess attendance. At the bottom of the structured journal, mentors were asked to rate the level of engagement of the participant during the session and in regards to their progress towards goal achievement. Mentors rated the items, *Youth actively participated during the session,* and *Youth is actively engaged in making progress towards achieving his/her goal* on a scale ranging from 1 (Strongly Disagree*)* to 5 (Strongly Agree). These ratings were then transformed into a total score and used to assess participants' level of engagement.

There was a relatively high average attendance rate with youth (90%). However, attendance rates varied between the 3 mentors and ranged from 84.2% to 97.3%. The

average score of a participant's responsiveness across all 3 mentors was 3.56. The average range of scores across all eight sessions was 3.17 to 4.04. Collectively, these scores suggest that on average, mentors "agreed" that participants were engaged.

A correlational analysis between participant responsiveness and adaptations was run and showed a positive and statistically significant relationship (.61, $p < .001$). Although this should be interpreted with caution as there was no valence tied to the adaptation, the fact that that there is a strong relationship between the two is consistent with the literature that suggests that adaptations are related to participant responsiveness. Participant responsiveness was also positively correlated and statistically significant with the strategies of role-play and reinforcement. The remaining scaffolding strategies showed small and nonsignificant correlations to participant responsiveness. This suggests that some of the strategies were more related to engaging participants than other strategies. Again, this type of data is useful to assess as it provides an indicator of which aspects of the implementation factors were tied to participant responsiveness.

In addition to the attendance rates and engagement scores from the structured journal, interviews with program participants were conducted. Postprogram, the mentors were asked to select 2 participants who they perceived to benefit the most from the program and 2 participants who they perceived to benefit the least from the program. Eleven of the 12 selected participants completed consent forms and agreed to the interview. These interviews were used to assess participant responsiveness, as defined by participant satisfaction with the program. Responses were analyzed qualitatively. Participants were asked how they liked the program, whether there were favorite or least favorite parts of the mentoring, what about the mentoring might have helped them, and if

the program could be improved, what that might be. Following the same analytic approach described earlier, the data were examined for themes.

Results from the participant interviews were largely consistent regardless of whether the youth had benefitted or not from the program. Nine of the youth all commented that the program was "good" or "okay." The most frequently cited favorite aspect of the program was related to the content (57%). The second most frequently cited favorite component was having one-on-one time with the staff (43%). The most frequently cited aspect of the program that was the least favorite was that mentoring sessions often conflicted with activity periods (45%). Consequently, youth were often pulled from activities to attend their mentoring session. When asked what the most helpful part of the mentoring program was, 64% of the youth commented that just talking to their mentor helped them out. One youth commented, "Matt (pseudonym for one of the mentors) actually talked to you and took time out. I actually got to explain the problems I had during the week." Thirty-six percent of the responses related to program improvement had to do with rescheduling the mentoring sessions so that they were not in conflict with activity periods.

Collectively, these data provide some valuable information concerning the perceptions that mentor's had on mentee's level of engagement as well as participant's level of satisfaction with the program. By identifying whether participants were engaged through the journal allowed for the opportunity to ask more targeted questions during the interview. These examples offer a specific and a multimethod approach to gathering data on participant's level of engagement. Recognizing that responsiveness is central to

achieving outcomes, practitioners should consider including measures of engagement as a key element assessed during program evaluation.

Discussion

The purpose of this paper was to provide a holistic perspective on implementation evaluation by offering the my own experience evaluating the implementation of a youth mentoring program. The ability to explain and identify the factors tied to a program's success is critical to program development. However, simple measures of outcome achievement fail to explain why a program is effective or ineffective. Consequently, it is important for evaluation research to move beyond outcomes and focus on assessing factors tied to program implementation. However, a need for measures of implementation evaluation exists for recreation practitioners.

This paper provides a number of examples with implications for using implementation evaluation processes in youth recreation programs. The first objective of this paper was to introduce a broader approach to implementation evaluation. To my knowledge, this is one of the first efforts to describe and illustrate how to assess implementation efficacy within recreation programs. Subsequently, the hope is that this paper provides a foundation for future efforts to build upon. Recognizing that program evaluation typically focuses on outcome achievement, it is our contention that while valuable, such an assessment is limited. Moving beyond outcomes to evaluating the processes that drive outcome achievement is essential to ensuring program efficacy. To this end, the application of Berkel and colleagues' model provides practitioners with a synergistic approach to assess important implementation factors. Because of the

dynamism of this model, I believe it to be a conceptually useful premise that can guide implementation evaluation for recreation professionals. Moreover, by assessing implementation factors, practitioners are able to identify effective and ineffective implementation processes that can then be used to direct future program improvement practices.

The second objective of this paper was to provide an example of implementation evaluation. As this paper illustrates, evaluating the implementation of the mentoring program helped to identify areas of strength and weaknesses in the program that can be addressed in the future. For example, the structured journal was particularly effective in identifying program fidelity and adaptations. As noted previously, mentors marked in the journal what aspects of the program they covered during a mentoring session. The intentional design of the content in this program was purposefully flexible; as a result, the fidelity criteria listed in the journal reflected key content areas to cover, as opposed to a more stringent set of criteria. The findings indicate that mentors were able to comply with the content to a high degree of adherence. This provides a degree of confidence that the content served as a primary source driving outcome achievement. These findings also suggest that taking a "key component" approach to fidelity works within a recreation context and provides room for adaptations.

The intent behind collecting data on quality was to determine mentors' use of scaffolding strategies. The structured journal provided a base level assessment on the strategies mentors used and allowed us to assess the frequency of their use and their relation to outcomes. What was found, however, is that the strategies most directly linked to greater self-regulation were the ones least used. From a program development

standpoint, the data gathered were especially useful in understanding how frequently mentors used a particular strategy. Although the data do not provide information regarding why certain strategies were used more frequently than others, they do offer valuable insight into the use of the program's scaffolding model. The basis of the mentoring program was directly linked to the use of these strategies, suggesting that the relative infrequency or lack of use in some of these strategies might have affected the program's effectiveness. The correlational analyses offered further insight into specific strategies and their relation to outcomes and participant responsiveness. Such information is a useful way to assess what strategies were effective and those that were not.

Collecting adaptation data was an effort to understand any challenges in the curriculum and to identify innovative ways to modify the curriculum that might improve the program. To this end, the data served their objective. The data provided a useful way to assess what modifications were made to core components of the program and understand how such modifications might be consistent/inconsistent with theory. These data in conjunction with exit interviews provided feedback on areas for future development. For instance, we were able to identify some areas to consider changing, such as modifying the schedule for when the program was delivered or tailoring the curriculum to meet developmental needs. Making these types of changes may improve participant responsiveness, which may in turn improve program outcomes.

The data on participant responsiveness showed that participants were moderately engaged during the mentoring session. This was consistent with findings from the exit interviews with the participants, who generally reported that they liked the program or that it was "O.K." Furthermore, correlational data showed that the number of adaptations

was positively related to higher levels of participant responsiveness. Collectively, these data provide a pulse on whether staff and participants perceived the program to be engaging and what factors contribute to engagement. This is important to gauge given the central role that responsiveness plays in moderating the effects of fidelity and mediating the effects of quality and adaptations. Although these findings provided some insight into the participants' general responsiveness to the program, they do not indicate how their level of engagement impacted its effectiveness.

Collectively, these examples serve to illustrate how collecting fidelity, quality, adaptations, and participant responsiveness data can be utilized to understand effective and ineffective implementation processes. Furthermore, these data help to determine key areas for future program improvement. The examples presented highlight the utility of the structured journal as an efficient tool to collect implementation evaluation data within a recreation context.

The third and final objective of this paper was to discuss how implementation evaluation might be practically applied within a recreation program context. Although the evaluation process illustrated in this paper was directed specifically toward a mentoring program, the framework and tools used to assess its implementation are applicable to youth recreation programs. The first step in developing the evaluation tools (i.e., structured journals) was to create a program logic model (see Figure 4.1). The program model identified key components of the program, detailed how it was supposed to be delivered, and linked these processes to outcomes. Based on the identification of these key components, Berkel's model was used as a reference point to develop the structured journal. The structured journal asked mentors to identify what content they covered

(fidelity), what strategies they used (quality), to describe any adaptations made, and to rate participant responsiveness. I believe that a similar process can be employed to develop evaluation tools that are tailored to individual programs and that can guide effective implementation evaluation. While an effective way to assess program efficacy, there are often a number of constraints that make conducting an evaluation challenging.

A common concern among practitioners is the amount of time and resources needed to conduct an evaluation. Given these concerns, the approach described in this paper was an effort to illustrate a cost-effective and efficient method to collect implementation data over several weeks. While perhaps not as objective as an observational assessment, the journal provided a substantial amount of data that provided a pattern over time that may have been difficult to capture with observations. Moreover, the resources needed to conduct enough observations to gather a comparable amount of data would have necessitated greater demand in resources (staffing, time, cost, etc.). In contrast, the structured journal took no more than a minute or two to complete. Although the structured journal was limited to the mentor's perspective and did not offer extensive information, this method was cost-effective, efficient, noninvasive, and offered valuable information.

Despite the utility and applicability of the methods described in this paper, there are two key areas where future work is warranted. Specifically, the measures used to evaluate quality and participant responsiveness were limited in scope and need further refinement. For instance, the method for ascertaining quality did not adequately capture whether the strategies used were the most effective for a given session, or with a particular participant. In turn, there was no assessment of whether the mentors used the

strategy competently. Given the significant role that recreation staff play in facilitating activities, managing risk, creating positive group dynamics, and so forth, how well those things are done oftentimes determines what a participant gains from the experience. Thus, future efforts should include not only looking at the strategies used, but also how competently they are employed. Utilizing an observer to coach and provide feedback to the mentors on their performance may enhance program effectiveness and provide a more objective indicator of quality, but would require additional resources (Kretlow & Bartholomew, 2010).

In a similar manner, participant responsiveness, as measured by the journal, was fairly limited. Although the results showed that participants were moderately engaged, the data cannot determine what about the program or delivery engaged participants. Follow-up interviews with the program participants, however, provided additional insight and captured what the participants liked/disliked about the program. From a program development perspective, the interviews provided more specific feedback into the participant experience. However, the interviews were more time-intensive than the journal. In the future, it may be more insightful to include in the journal specific behaviors, actions, and/or tasks that delineate what responsiveness looks like in this context and with this type of program. A more research-intensive approach might involve having outside observers rate how engaged the participants were.

In sum, the approach to assessing implementation efficacy described in this paper provided valuable insight on effective/ineffective processes and areas for future program development. As illustrated by the examples, the structured journal was particularly effective in determining program fidelity and adaptations. However, further research is

needed to refine measures that more effectively capture quality and participant responsiveness.

Conclusion

To conclude, this chapter has provided a basis for understanding how to assess implementation efficacy within recreation programs. Specifically, this chapter illustrated the methods used to assess the implementation of a structured mentoring program delivered in a youth recreation context. Berkel and colleagues' model offers a holistic approach to assess implementation efficacy by evaluating fidelity, quality, adaptation, and participant responsiveness. This model in conjunction with the methods and tools illustrated in this paper provides a foundation to guide practitioners through conducting implementation evaluation. Without knowing *why* a program is successful or unsuccessful, recreation programmers, researchers, and funders are left with little direction, accountability, or way to identify improvement practices beyond the outcomes themselves. Thus, recreation professionals should embrace implementation evaluation as a best practice to ensure effective delivery of programs.

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CHAPTER 5

SUMMARY

The purpose of this dissertation was to articulate how recreation programs might support the development of self-regulatory skills in youth. Chapter 1 provided an introduction to the dissertation, and Chapters 2-4 offered three related, yet distinct, chapters to conceptually establish, empirically test, and evaluate a mentoring curriculum as a mechanism to support the development of self-regulation in youth. Chapter 5 is a summary of the dissertation. Chapter 2 provided a conceptual argument establishing the link between the development of self-regulation to recreation programming. Building on the premise of Chapter 2, Chapter 3 tested the effects of a mentoring program on youth's development of self-regulation. Finally, Chapter 4 evaluated the implementation of the intervention described in Chapter 3. The purpose and findings of each chapter are discussed below.

Chapter 2 was a conceptual synthesis that describes the central role self-regulation plays in driving healthy developmental trajectories in young people's lives (Dahl, 2004). This chapter proposed that recreation programs are an ideal context for youth to learn how to self-regulate. Self-regulation is considered to be one of the most important functions driving healthy behavior (Posner & Rothbart, 2000). Yet, for youth their ability to self-regulate is still maturing, thus making them vulnerable to engage in

risk-taking behavior (Masten, 2004). Recently, efforts have been made to identify contextual factors that can support youth's developmental needs and their ability to self-regulate. Drawing on this literature, three key leverage points were identified that are especially relevant, and ideally situate, recreation programs to promote self-regulation in youth. First, programs that are fun and enjoyable offer important opportunities to experience intrinsic motivation, engagement, and positive emotions, all of which are tied to self-regulation. Second, programs that include goal-oriented, challenging, and skill building activities offer experiences that engage cognitive processes tied to self-regulation (problem-solving, decision making, strategizing, etc.). Third, recreation programs provide a strong social context that is well aligned to support the development of interpersonal relationships. By scaffolding the social context, recreation programs can use adult staff-youth and peer interactions in ways that foster and support self-regulation. Based on these findings and proffered strategies, I developed a curriculum (Morgan, 2011) that served as the intervention described in Chapter 3 and that was theorized to promote self-regulation.

Chapter 3 presents an empirical investigation to test the effects of a mentoring program on youth's levels of self-regulation. The mentoring program was an 8-week-long intervention that was implemented over the course of a summer recreation program. Recreation staff were trained as mentors and would meet with program participants (mentees) once a week for 8 weeks. Building on other self-regulation interventions, the focus of the curriculum targeted four primary curricular components: relationship building, goal setting, monitoring, and evaluation (Cleary, Platten, & Nelson, 2008;

Wyman et al., 2010). Mentors were asked to deliver the curriculum using scaffolding strategies, a technique associated with improvements in self-regulation (Wyman et al.).

The mentoring intervention was delivered at a municipal recreation program that operated multiple program sites. Two sites were matched, with one serving as the intervention site (had mentoring), and the other as a comparison site (no mentoring). It was hypothesized that program participants in the treatment site would show greater changes in self-regulated behaviors than participants in the comparison group on the subscales of the BRIEF-T that measure planning, organization of materials, working memory, initiate, and monitoring.

Self-regulation scores were collected on the 85 participants enrolled in the recreation program. Sixty-four ($N = 64$) complete data sets were available for hypothesis testing. Results indicated a significant difference in self-regulation with the treatment group on planning and organization of materials subscales. Despite a lack of significance on the other dependent variables, the mean scores on each variable revealed that adolescents at the treatment site showed a greater rate of change in working memory, initiate, and monitoring, over the comparison site. While these findings are promising, given small effect sizes, and several limitations, further research is warranted. To this end, it was important to move beyond simply understanding the outcomes, and identify the effective and ineffective processes tied to the implementation of the intervention, which Chapter 4 addressed.

The purpose of Chapter 4 was to introduce a broader approach to evaluation by providing an example of implementation evaluation on the mentoring program described in Chapter 3. I used Berkel, Mauricio, Schoenfield, and Sandler's (2011) integrated

model of program implementation to provide a conceptual framework to guide the development of implementation evaluation tools. Drawing on Berkel and colleagues' model, there are four primary implementation factors, fidelity, quality, adaptation, and participant responsiveness, that drive program efficacy. Each of these factors was operationalized to coincide with the core elements of the mentoring curriculum that were theorized to drive outcome achievement. A structured journal was developed as the primary implementation evaluation tool. The structured journal provided a way for mentors to log adherence to the curriculum (fidelity), identify scaffolding strategies (quality), describe adaptations made to the curriculum, and indicate how responsive participants were to the mentoring. At the end of the summer program, mentors and participants were interviewed to provide additional insight into the data documented in the journals.

A total of 232 structured journals were collected from 29 ($N = 29$) participants over the 8-week-long summer program. In addition, interviews were conducted with the 3 mentors and 10 program participants who were identified by their mentor as most/least benefiting from the program. Responses were quantitatively and qualitatively analyzed. The findings from conducting the implementation evaluation on the mentoring program provided some practical implications for recreation service providers. In general, the use of the structured journal was an efficient and cost-effective approach that required minimal resource demand from the mentors to complete. However, there were some limitations in the data collected that warrant further refinement of the tool. In terms of fidelity, mentors were quickly able to indicate whether they covered the content or not. Quality was collected in a similar way; however, it was more difficult to determine

whether the use of a particular strategy was effective. By simply ascertaining whether a strategy was used or not did not provide insight into whether the strategy was the most effective strategy at the time of implementation. Future efforts should look to create observational tools or have mentors rate their perception of whether the strategy was effective. The structured journals proved useful in collecting adaptation data that can direct future program improvement efforts. Finally, mentors were asked to rate participants' level of responsiveness to the mentoring program. These data were tracked in the structured journal and were useful to gauge mentor's perceptions of engagement, but lack an objective assessment of actual engagement. Follow-up interviews provided some insight into how satisfied participants were with the program, but again, these interviews were limited as they were retrospective. Future efforts should utilize a youth survey to assess engagement throughout the program. Collectively, this chapter illustrated a broader approach to evaluation by illustrating methods for conducting implementation evaluation that might be useful for practitioners to adopt.

Conclusion

Self-regulation is essential to the healthy development of youth. Many youth lack access to the adequate resources that provide important developmental nutriments necessary for a healthy trajectory into adulthood. With the right tools and training, recreation programs are a youth context that is well positioned to support self-regulation. Each of the chapters presented in this dissertation offer conceptual, empirical, and evaluative evidence supporting this premise. Moreover, these chapters provide

implications for practitioners to design, implement, and evaluate a mentoring program supporting the development of self-regulation in youth.

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APPENDIX A

STAFF INTERVIEW PROTOCOL

Staff Interview

MENTOR INFORMATION	
Program:	Site:
How long have you worked for YouthCity?	_____ Months
Job Position (i.e., teacher, coordinator)	_____
Demographics:	Male_____ Female_____Age_____

1. How did you think the mentoring program went?
    a. What worked well?
    b. What didn't work well?

2. What worked well regarding the training?
    a. What would have better prepared you for the summer?

3. What worked regarding the curriculum (i.e., workbook, goal sheets, etc)
    a. What didn't work as well?
    b. In prior meetings, it was brought up that spending more time on developing goals would be useful for the participants. Can you elaborate on this idea and why you think it would be beneficial?

4. What implementation strategy worked well? Please provide an example.
    a. What implementation strategy did not work as well?

5. What was the most common way you modified/adapted the curriculum?
    a. Why do you think this modification was necessary?
    b. The most commonly referred to modification/adaptation in the journals were time-related, such as needing to catch participants up to a given week. In your opinion, what were the main contributing factors that resulted in needing to condense mentoring sessions?
    c. What effect do you think this had on the overall mentoring experience for participants?

6. How engaged were the participants to the mentoring sessions?

a. What aspect of the mentoring sessions most engaged participants? Please provide an example. What aspect of the mentoring sessions least engaged participants?
b. *In one of our first meetings, it was mentioned that anywhere between 15-25% of the participants showed little to no engagement in the mentoring sessions. It seemed like this was a fairly consistent theme that continued*
c. *for the rest of the summer. Can you discuss why you think there was that level of disengagement?*
d. *In one of our meetings, it was brought up that the participants seemed to focus more on pursuing social goals, rather than activity-oriented goals. Can you elaborate on this? What effect, if any, do you think this had on the mentoring program and reaching program outcomes?*

7. *What is one specific aspect of the program that was the most helpful in supporting self-regulation in participants? Please provide an example.*

8. *What is one specific aspect of the program that was the least helpful in supporting self-regulation in participants? Please provide an example.*

9. If we received additional funding to run this next year, what are the main priority changes you would suggest?

10. Any final thoughts?

APPENDIX B

YOUTH PARTICIPANT INTERVIEW PROTOCOL

Youth Participant Interview

1. I'm here from the University of Utah, how did you like the mentoring program when you met with staff?

2. Did you have a favorite part and if so, what?

3. Did you have a least favorite part and if so what?

4. What were your goals that you set for the summer?

5.What about the mentoring program helped you work toward achieving this goal?

6. Were you able to achieve this goal? Why or why not?

7. What are some ways you think this mentoring program could be improved if we ran it again next year?